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OCTOBER 1961

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Kansas City, Missouri, December 4 to 8, 1961

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Head of Industrial
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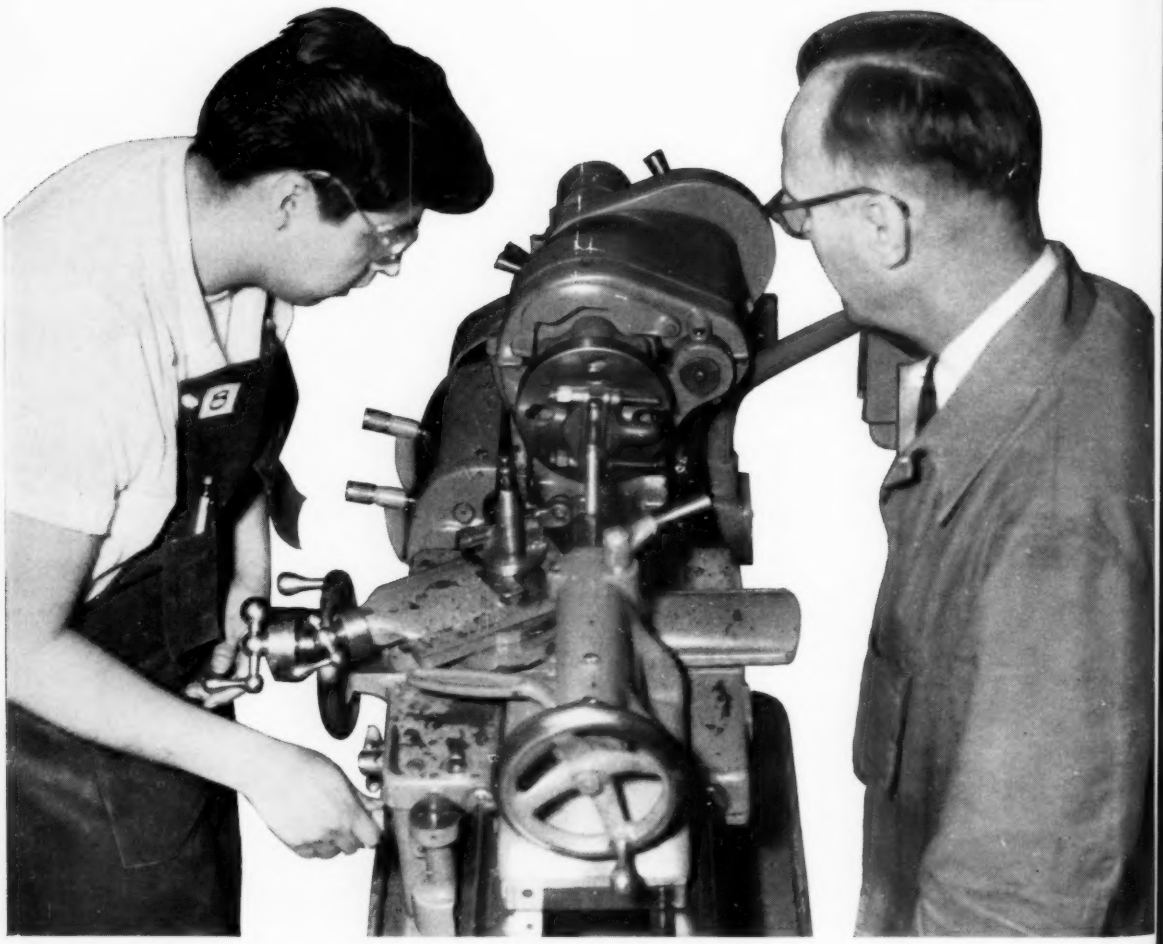

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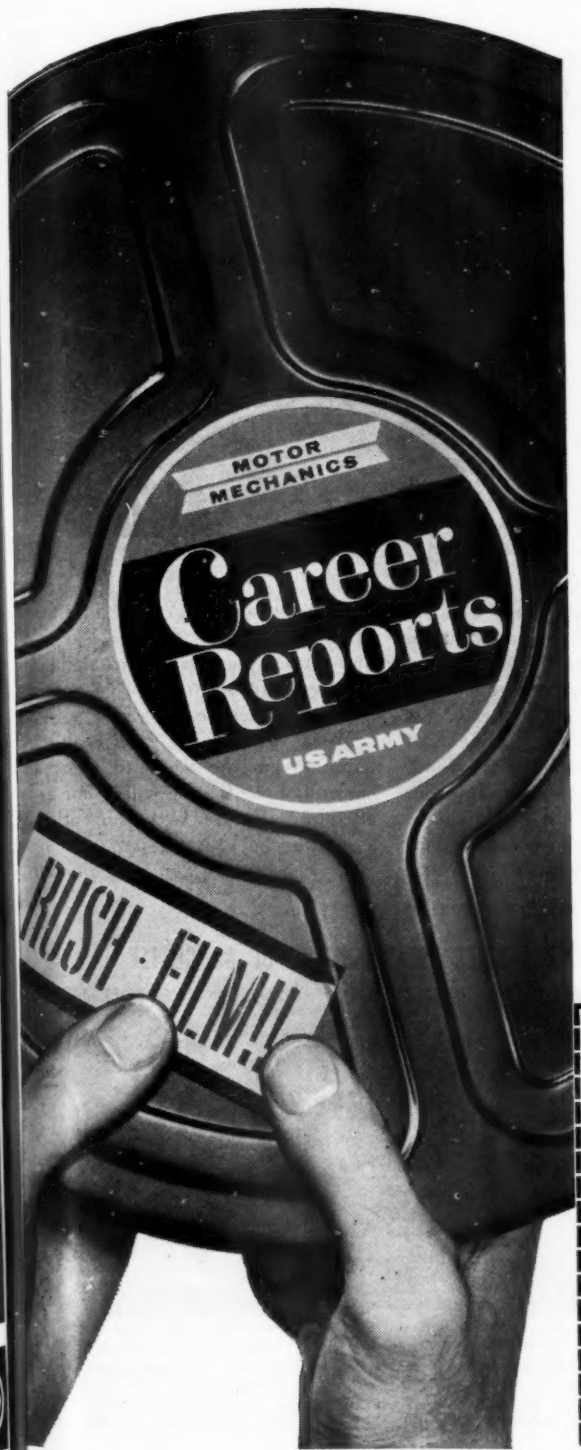

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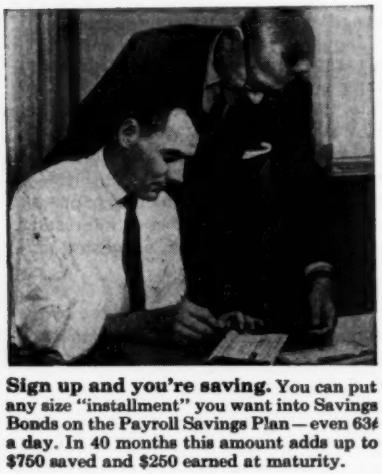

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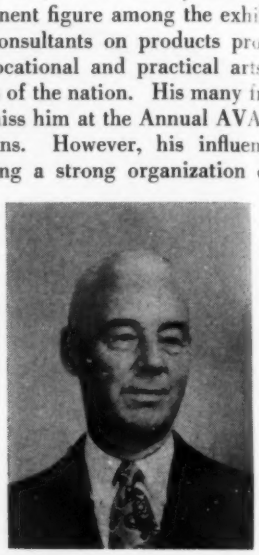
Organized by the American Petroleum Industry, the course is directed by the Petroleum Extension Service of the University of Texas. Other sponsors are the Texas Education Agency and Lee College.

Scheduled for this session are 41 topics covering subjects from public relations to prime movers—and a lot in between including economics, welding, hydraulics, corrosion, testing, inspection, tank farm design, maintenance, and automated pipe line systems.

An AVA Resolution passed at the Los Angeles Convention has won approval in Puerto Rico. The resolution called for the Secretary of Education of Puerto Rico to name a school for the late Dr. Francisco C. Urgell, AVA Life member and Past President of the Puerto Rico Chapter. A school now under construction in Fajardo, P.R., will be named the Francisco C. Urgell Vocational School. Dr. Urgell passed away on November 7, 1960.

Harry E. Masters, Educational Director, The L. S. Starrett Company, Athol, Massachusetts, retired on September 15, 1961. Harry has been a prominent figure among the exhibitors and consultants on products provided the vocational and practical arts programs of the nation. His many friends will miss him at the Annual AVA Conventions. However, his influence in building a strong organization of exhibitors will be felt for many years to come.



Those who wish to write him to express their thanks for his leadership and service may write him at the following address: 61 Prospect Street, Athol, Massachusetts.

We all wish Harry good health and happiness in the years to come and sincerely hope that he will honor us by attending a future AVA Convention as a guest of the AVA.

—Lowell A. Burkett

COMMITTEE STUDIES ESTABLISHMENT OF AG CENTER

AVA's Committee on the proposed National Center for Advanced Study and Research in Agricultural Education met in Washington, September 11-13. A proposal for the establishment of such a Center was developed and will in due time be made public. Committee members and alternates in the picture above are from left to right, R. C. S. Sutliff, N. Y.; H. M. McDonald, Md.; A. G. Bullard, N. C.; George O'Kelley, Ga. (Chairman); W. T. Spanton, U. S. Office of Education; George Cochran, Minn.; C. W. Hill, N. Y.; S. S. Sutherland, Calif.; and Walter Bjorraker, Wisc.

AND THERE

Thirteen Canadian industrial arts teachers attended the Technical Training Center of The Cincinnati Milling Machine Company, Cincinnati, during the summer, receiving "college equivalent" credit upon graduation. They studied latest developments in machine tool technology. The Ontario Secondary School Teachers Federation has approved the granting of two technological teaching credits for satisfactory completion of the course, enabling the teachers to upgrade their teaching certificates.

The course is the first of its type to be established for Ontario school teachers. It totals 160 hours, including 96 hours of classroom work and demonstrations, and 64 hours of "on the job" training with the latest machine tools. Among the subjects are milling machine operation, precision cylindrical grinding, research in metal cutting, electrical discharge machining, and theory and application of numerical controls.

Dr. Earl H. Knebel, superintendent of schools at Cameron, Tex., became professor and head of the Texas A. and M. College Department of Agricultural Education on Sept. 1. He left A. and M. in 1960 to become superintendent of schools at Cameron and has had wide experience in the education field. Dr. Knebel received his BS degree in 1946 at Montana State College, his

Master of Education degree in 1951 at Texas A. and M., and his doctorate in 1955 at Oklahoma State University. The educator's teaching experience at A. and M. College began in 1955. He will succeed E. V. Walton, who will conduct private consulting service in counseling and guidance for public schools in Texas.

Esther Peterson was sworn in as an Assistant Secretary of Labor on August 17 by Secretary Arthur J. Goldberg. Mrs. Peterson becomes the first woman to hold her new post. Now a member of the President's Little Cabinet she has been Director of the Women's Bureau and Assistant to the Secretary of Labor since late January. She will continue as Women's Bureau Director as well as take on the new policy-making decision.

Mrs. Peterson was born in Provo, Utah, and attended public schools there

where her father was Superintendent of Utah County Schools. She received a Bachelor of Arts degree from Brigham Young University in 1927 and a Master of Arts degree from Columbia University's Teachers' College in 1930.

Prior to entering federal service, Mrs. Peterson was Legislative Representative of the Industrial Union Department of the AFL-CIO.

The new Assistant Secretary will be a featured speaker at the AVA Convention in Kansas City.

One of the high points of the Fifth DECA National Officers Training Conference (June 20-24, Washington, D. C.) was the presentation of DECA's Certificate of Outstanding Service. It was given to Luther H. Hodges, Secretary of Commerce by Wayne A. Paper, the club's national President. Primary objectives of the four-day conference were 1) complete orientation of the club program, 2) learning of national responsibilities, 3) planning for 1962 national leadership, and 4) the conference to be held April 26-28, 1962.

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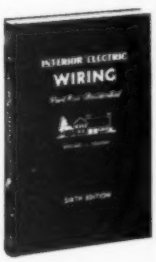

by Kennard C. Graham

This is not just a HOW TO book. The author not only explains practical wiring procedures, but stresses such other essential facts as wiring safety, alternative wiring methods or forms and their relative merits, designs, and estimating. Considerations have been given to such modern conveniences as refrigerators, washing machines, furnaces, built-in appliances, and the problems arising therefrom. This up-todate revision is based on current usage and needs, and includes all the newest equipment available.

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Some 249 high schools boys from 35 states and Puerto Rico shared $15,000 in award money in the 1960-61 arc welding competition sponsored by the James F. Lincoln Arc Welding Foundation. To help widen vocational interest in arc welding, the Foundation this past year broadened the competition to include industrial education students as well as vocational agriculture students. A total of $7,500 was split up into 85 awards in the new Industrial Education Division, which includes two sections—one for industrial arts students and another for trade and industry students. Another $7,500 went to vo-ag students.

Winning industrial education projects ranged all the way from an automatic beehive loader to a World War II Veterans Memorial. Each boy designed and built his own project under the guidance of his shop instructor. Some projects cost several hundred dollars for materials; others as little as five dollars. Awards were based on the usefulness of the project, the ability and ingenuity shown in its design and construction, and the clarity and completeness with which the project was described and illustrated in the entry sent to the Foundation.

●

Ninety-five percent of all public secondary schools of the United States offered home economics in 1958-59. An estimated 2,353,000, or 49 percent of girls in these schools were enrolled in home economics courses. This information was revealed in a study made by the Home Economics Education Branch of the Office of Education in the spring of 1959 under the direction of Beulah I. Coon.

A report of the findings from the study is being published as Office of Education Circular 661, *Home Economics in Public Secondary Schools*, and will be available in 1962. Data from the study have been analyzed for the most part on a national and regional basis, although a number of states have secured the IBM cards for their states and are making a more detailed analysis on the state level.

The national study of home economics in public secondary schools was conducted as a questionnaire survey of a random sample of 4300 public secondary schools in the 50 states and the District of Columbia. On the basis of information obtained from a previously conducted pilot survey of 317 schools, those with less than 100 pupils were excluded, except in the thinly populated states of Alaska, Hawaii, and Nevada. Also excluded were trade schools, adult and continuation schools, and schools exclusively for boys, most of which were also trade schools.

●

A double tip of our editorial eyeshade is due *Catering Industry Employee*, magazine of the Hotel and Restaurant Employees and Bartenders International Union. CE's June issue carried an excellent series of articles on vocational training opportunities in the hotel and restaurant and related trades industry. The series carried articles on the Culinary Institute of America, Detroit's Chadsey High School, and university training programs—notably Michigan State and Cornell. Also included was an up-to-date listing of institutions offering vocational study programs for hotel and restaurant workers.

CE's editor was also kind enough to send us his September, 1960, issue which carried the "Cincinnati Story: relief rolls to payrolls." With the "Newburgh (N.Y.) Story" fresh in our ears, the Cincinnati angle offers at least a brighter, more constructive approach to "a vexing modern social problem: how does a community find useful work for . . . those ready, able and willing to work, but lost in the backwaters of public welfare?"

●

Harold E. Urton, State Supervisor of Agricultural Education in South Dakota, was given special recognition at the 1961 annual conference of vocational agricultural teachers, August 3. An award plaque, presented by the South Dakota Agriculture Teachers Association to Mr. Urton, marks the completion of twenty-five years as supervisor.

Urton has served for two years as the Central Regional member of the FFA Board of Directors; has served in numerous official capacities for the Central Regional Conference of State Supervisors and Teacher Trainers in Agricultural Education; has been active in the AVA and NVATA; and has served for many years as treasurer of the state's vocational association.

He holds Bachelor's and Master's degrees from South Dakota State College, and has been honored by that institution for his outstanding professional service to education. During his tenure of service as state supervisor the state's FFA membership has increased to over 3,000.

●

In an effort to determine the area of training and the training needs in the data processing field and the implications for vocational education, the Area Vocational Education Branch has been meeting with the educational representatives of electronic data processing equipment manufacturing plants and through contract arrangements with the State Department of Education and Orange Coast College, California, to produce a suggested two-year post high school curriculum guide in business data processing. For the past six months Orange Coast College has been working closely with industry and the Area Vocational Education Branch in the preparation of this curriculum. When completed this material will be made available to the states.

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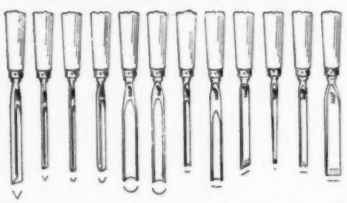

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COVER: Left to right shows Muehlebach Towers, Aladdin and President Hotels, and the Municipal Auditorium where AVA Convention meetings will take place in Kansas City, Missouri. Landscaped foreground covers Municipal Auditorium garage. Underground passageway provides direct route from Towers to Auditorium, and vice versa.

latest word from WASHINGTON

THIS PRE-CONVENTION ISSUE of the JOURNAL carries much information about the forthcoming 55th Annual Vocational Convention to be held in Kansas City, Missouri — December 4-8. Excellent programs have been planned. The Honorable Abraham A. Ribicoff, Secretary of the Department of Health, Education, and Welfare, will be the principal speaker at the Opening General Session and Dr. Sterling M. McMurrin, U.S. Commissioner of Education, will be the featured speaker at the Second General Session. Both these outstanding leaders should bring messages of hope and encouragement to vocational educators who will be in attendance. Outstanding exhibits will be on display. It is anticipated that between 3,000 and 4,000 will be in attendance.

Annual vocational conventions have, through the years, provided forums that have helped materially to shape America's programs of vocational education. The work and activities of every vocational worker in the nation has been influenced as a result of AVA conventions whether he ever attended one of the meetings or not. The Kansas City Convention will once again afford an opportunity for vocational teachers and leaders throughout the nation to meet and exchange ideas and experiences and to plan programs of action for the days and years ahead. We hope you will be able to attend.

EDUCATION LEGISLATION. The year 1961 has proved an interesting, challenging and frustrating legislative year so far as education is concerned. When Congress convened in January, there was high hope that it would act favorably on broad general-aid-to-education measures. For the first time in the history of the country the President of the United States had, in his campaign pledges, promised all-out support of federal-aid-to-education measures. Many members of Congress were elected on platforms pledging support of federal-aid-to-general-education.

Soon after Congress convened, an array of education measures (including those sponsored by President Kennedy) were introduced in Congress. Extensive hearings were held. Everything seemed to be involved. The press in most parts of the nation documented well the controversies these issues brought forth. Largely as a result of these controversies, Congress passed no new education measures during the 1961 session. It did extend for two years the impacted areas acts (P.L. 715 and P.L. 874) and all titles of the National Defense Education Act. Although there was no serious Congressional opposition to the extension of these Acts, there did develop a Congressional fight over whether or not they should be extended for one year or for two years. Proponents of federal-aid-for-general-education wanted them extended for only one year so they could be used as a lever in an effort to secure support for aid-to-education bills that will be pending during 1962. The overwhelming majority (378 for - 3 against) of the House favored a two-year extension. In the Senate the vote was close - 40 voted for a one-year extension and 47 for a two-year extension.

Reliable sources are of the opinion that, as a result of this year's action of Congress, the NDEA and the impacted areas acts will not become involved in the effort of Congress to secure approval of general-aid-to-education measures during 1962.

VOCATIONAL LEGISLATION. This year (1961) has proved a reasonably successful legislative year insofar as vocational education is concerned. Congress extended for four additional years the practical nurse measures and eliminated the restrictive language limiting use of funds to new programs. A total of $4.5 million for vocational education was approved as a part of the Area Redevelopment Act. The NDEA, including Title VIII dealing with area vocational programs, was extended without amendments

for two years. Appropriations for all programs total $53,633,312 — an all-time high and an increase of $3.8 million over appropriations for 1961. This includes the maximum authorized for agriculture, home economics, distributive occupations, and trade and industrial education.

The Senate approved S. 1991 by a vote of 60 to 31. This bill authorized federal funds for the training of unemployed workers and youth who lack marketable skills. This measure (H.R. 8399) never reached the floor of the House for action. The House Rules Committee voted to defer action on it until Congress reconvenes in January 1962. It is our opinion that this measure (H.R. 8399) has a 50-50 chance of approval by the House. The employment situation during the early part of January will influence support for it, if, and when, it is brought up for consideration in the House.

The Youth Conservation Corps measure (S. 404 and H.R. 8354) which has been approved by both the House and Senate Committees was not taken up for consideration in either the Senate or the House. It will be pending legislation when Congress reconvenes in January.

A COMMISSION ON VOCATIONAL OPPORTUNITIES FOR RURAL YOUTH has been appointed by the National Farmers Union. (See picture, page 36, in this issue of the JOURNAL.) One of the primary purposes of the Commission is "evaluation of general vocational training and opportunities available to youth reared in rural-farm areas, including retraining opportunities for older youth and adults." We are of the opinion that this Commission will work in close collaboration with the Vocational Advisory Committee or Task Force, which will soon be announced by President Kennedy. Although we had no definite information from appropriate Federal officials, we are of the opinion that the Task Force will be announced soon after Congress adjourns.

A NEW JOURNAL MANAGING EDITOR — Harry H. Cutler — has been named — beginning with the November issue. He comes to us highly recommended. We believe he will be able to maintain the high standards that have been established by the JOURNAL in recent years.. Peter C. Crolius, who has served one year as the JOURNAL Managing Editor — and has done an excellent job — has accepted the position of Executive Secretary of the Vegetable Growers Association of America. We wish Pete well in his new job and we have every reason to believe that he will perform his new responsibilities in an excellent manner.

MEMBERSHIP. Have you renewed your AVA membership for 1962? Now is the time to take care of this important matter. Many new vocational developments will occur in the year ahead — that will be reported only in the JOURNAL. So to keep up to date and to make your influence felt, you should renew your membership in the AVA and continue to receive the JOURNAL without interruption. To get ahead in any occupation one keep abreast of progress and developments in his chosen field of work. To do this, vocational and practical arts educators must read the AMERICAN VOCATIONAL JOURNAL. which comes with your membership in the AVA.

Sincerely yours,

M. D. Mobley

M. D. Mobley
Editor-in-Chief and
Executive Secretary

The Industrial Education Image

Howard A. Campion

This paper, the Samuel Leonard Fick Lecture on Industrial Education, was presented by the author at the Twenty-Third Annual Conference on Industrial Education

American education has, during the first half of the twentieth century, undergone extensive and important changes as adjustments were made to meet the needs of the nation and its rapidly expanding population. During this period Industrial Education has become a significant phase of the evolving public school program, and today stands as great tribute to the ability of our educators to adapt the total area of curriculum service to the demands of a society that has moved steadily toward industrialization and urbanization. But Industrial Education has different meaning and significance to different people, and there are many who do not understand its full significance in the educational scene; many lack a true picture of the purposes of this area of education and the part it plays or can play in the development of citizens who are both socially and economically competent. Many lack a clear image of this educational discipline.

To adequately deal with the topic, The Image of Industrial Education, it is necessary to examine the climate in which industrial education grows. What is its relation to other areas of education and to the various disciplines that represent man's activities in current society? How well has it been able to adjust to the rapidly changing technological scene; and who are the people or publics that use its services and make judgments about it? In short, who and what are creating the image or images of industrial education and who are the people that are receiving these images?

THE NATURE OF AN IMAGE

Much has been said in recent months about the corporate image which refers, we may presume, to the concept or mental picture that is held by the public of the corporation in question. We have also heard in a recent election campaign about the image of our nation in the minds of citizens of other countries, and there seems to be great concern about what others think of us. It might be well to discuss how images are formed—sometimes wholly through fancy, or imagination; and other times through interpretation of physical evidence! But even when an image is based solely or largely on facts there are many ways in which it may be modified or distorted!

You may have stood before the curved mirror in the penny arcade and exclaimed in wonder at your own image. Or you may have received an image through an optical system that greatly magnified (or reduced) parts or all of the object being examined. Some images come through colored glasses, gray or blue or rosy; some are upside down; all are in some part subject to your own interpretation and what you know about the object and how you *feel* about it.

So it is with the image of an institution! What does a school "look like" to a parent? to an employer? to a prospective student? to staff members of another school? How does each interpret what he sees or hears or feels about a school or a program or a course? This is the problem we have agreed to discuss or explore at this conference, and it is necessary to examine the background and the frame of the picture.

INDUSTRIAL EDUCATION IN PERSPECTIVE

Industrial education has been a combined effort of public schools, industry, labor, and private or proprietary schools, each making a contribution to the reservoir of skilled workers needed by American industry. It is possible to distinguish growth cycles in this area of education that are marked by (a) the needs of a new industrial nation throughout the latter two-thirds of the 19th century; (b) the agitation for public operated industrial schools during the first two decades of the 20th century culminating in the passage of the federal Vocational Education Act of 1917; (c) the crash programs of World War I; (d) the coordination of industrial arts and industrial vocational education; (e) the development of a national program of apprenticeship; (f) the National Defense training needs of the second world war and more recently the emphasis on technology, automatic controls, and space exploration that has changed the nature of the industrial labor force.

Programs of industrial education reflect the social, political, and economic progress of the people; and are modified by changes in the way of life caused by war, depression, political ideology, periods of plenty and prosperity, and in no small way by scientific discovery and

invention. Can any educational program remain virile and dynamic if its leaders fail to measure the importance of these tides in human affairs or neglect the elements of change in the environment in which they are operating?

THE CHANGE IN THE RATE OF CHANGE

Education is in ferment throughout the nation and especially in the state of California where our population growth has been matched by our development of new industries, new materials and new processes. We need not discuss here the details of these tremendous changes, but merely note the rapidity with which changes have been taking place since the last war. There is nothing new about change! We have always had change! But we must be concerned with the change in the *Rate* of change. To dramatize this change in the speed with which new ideas are developing we can use a device employed by Thomas D. Bailey, Superintendent of Public Instruction, Florida.

Suppose that mankind has had approximately 50,000 years of history. To make this span of time more comprehensible let us compress it into 50 years. By this scale we stopped being cave men ten years ago. The first forty thousand years of man's existence on the earth represents very little progress, but during more recent times things began to happen. Five years ago we invented pictorial writing and we are now discovering some of the early expression of ideas by pictures on the walls of caves in France and in central Africa. Two years ago Christianity was born, only a few months after the first carpenter plied his trade. Fifteen months ago we got our first printing press. Ten days ago electricity was put to practical use. Yesterday morning the first aeroplane flew! Yesterday noon we organized our first industrial arts programs. Radio was invented last night just before this morning! The commercial jet was invented since I started talking!

Equally startling is the comparative recency of what we now accept as commonplace in travel and communication. How fast could man travel 50,000 years ago? Only as fast as he could run! Somewhere along the course of history he captured and tamed an animal that resembled the horse of today, and by riding this beast he increased a little the speed with which he could get from here to there. But the top speed of a horse remained man's top speed of travel for thousands of years—until the invention of the locomotive in the early nineteenth century. From then on man has learned to cover the miles faster and faster. In 1910 the United States Army let a contract for its first military airplane. The specifications called for a speed of 40 miles an hour. In 1925 the fastest ground speed was attained at the Indianapolis Speedway when the winner clocked up a record of 100 miles an hour. In 1945 the army had developed a plane that could fly 470 miles per hour. This speed seemed so fantastic that it was kept a top secret for months.

Then something happened! We broke the sound barrier! Since then we have developed space machines that will travel 18,000 miles per hour—and probably much faster if we knew the whole story!—Yes, man has learned to get up and go.

TECHNOLOGY IN INDUSTRY

Memorary devices have made their appearance in recent months as another product of the industrial science laboratory. Typical of these machines is one now in use in the offices of security brokers. An instrument the size of a very small adding machine is equipped with buttons or keys like a typewriter. In addition to the letters of the alphabet there are three keys—one for the New York Stock Exchange, one for the American Exchange and a third for the Pacific Coast—(or other) exchange. By pressing the letters of the ticker symbol for any stock—(nearly 1300 on the N.Y.S.E. alone) such as G.M., the symbol of General Motors Common stock—and pressing the key for the exchange desired, there appears almost at once on a tape all of the transactions in this particular stock for the entire session. This small keyboard is wired to a memory drum that carries in its "head" all the transactions of every stock on each of at least three exchanges for an entire session. It can furnish an up-to-the-minute summary of all the transactions with the prices for any of the stocks listed! What great possibilities lie within this device for teaching machines — inventories, production schedule controls, etc.!

Many other current announcements tell of new products, processes or materials; new methods of power development through the application of atomic energy; the photographic transmission of messages or entire documents; new methods and materials in the graphic arts; radically changed methods and usage of new materials in the construction industry, the use of modern design and color combinations on hundreds of new appliances, furniture, automobiles and gadgets.

These changes are bringing with them a demand for new knowledge and skills on the part of industrial workers. Both educators and industrialists are becoming aware of this demand for new types of training programs and finding that many of the established, well-entrenched curricula are not meeting the needs of the dynamic sixties.

EMPHASIS ON SCIENCE AND MATHEMATICS

There has been an almost fanatical rush to the physical sciences and mathematics both in secondary and higher schools. It is probably inherent in social progress that overemphasis is necessary to get action on needed reform! It is possible that the pendulum has again swung too far in the direction of abstraction—it is certain that many youth have been encouraged to try to become scientists and engineers when there is ample evidence that they will be needed more in occupational levels for which they are better equipped mentally and emotionally.

We breached an industrial frontier after World War II with breakthroughs in electronics, metallurgy, plastics, petrochemistry, molecular physics. Rare metals such as berllium, rhenium, titanium, vanadium, zirconium, were put to work for the civilian economy. New industrial processes—vacuum technology, cryogenics, semiconductor electronics, thermo-electric power, and automation—were developed and perfected.

The second industrial revolution is not over—it has just begun! Industry has barely tapped some of the sciences like solid state physics, polymer chemistry, synthetization of new materials, and the application of the computer principles to production control, teaching, management, navigation (especially in the air) and to health, birth, marriage and other types of statistical records!

Is industrial education ahead or behind the industrial revolution? or is it just comfortably resting in the rock-

ing chair of yesterday, dreaming about the breadboard and footstool—beautiful projects of the past? Here is where the "image" is taking form in the minds of industrial leaders and the critics of education.

THE BALANCE OF VOCATIONAL AND GENERAL EDUCATION

While so much of energy and resources are being devoted to technical development, what is happening to our ability to live together as civilized human beings? "In our time," says Phillip H. Coombs,[1] "the cultural gap between our greatly advanced techniques of production, communication, transportation and warfare, and our much less advanced techniques of conducting human affairs has grown dangerously wide. With the means now available to destroy civilization in a matter of minutes, with scientific discovery still galloping ahead at an accelerating pace, with a worldwide explosion of population and of pent-up human aspirations, and with a gigantic struggle under way between political freedom and tyranny, it becomes imperative that this gap be closed."

Dr. Coombs has no pat answer to this problem—and I do not know if we can help much through our program of broad industrial education—but we can make a few suggestions!

One thing that can be done better in an industrial laboratory or shop is the development of an understanding of the occupations represented in our program and the part these areas of work play in satisfying human wants.

A second thing we can do is give the youth who may lack some of the powers of abstraction, a chance to see science and mathematics at *work*—in real situations. History is filled with the names of great achievers who failed to understand many abstract principles until they approached them from the practical angle. Industrial education is the vehicle by which mathematics and science can come alive.

And another contribution can be made by industrial education that helps in closing the gap between scientific advancement and social understanding. This is the understanding of the right of an individual to choose his occupation and live with it and work at it in cooperation with others on the team! Nowhere in the school curriculum can situations be so well set up to advance the understanding of goals of an industrial society and means of attaining such goals through cooperative endeavor. Industrial education is group action and good citizenship at work.

IMPORTANCE OF RESEARCH

Even a brief examination of the progress made in certain technical fields during the past decade convinces one of the importance of intellectual curiosity! An interest in new methods and materials and a willingness to break with the past has brought us some of the most remarkable accomplishments of man's entire history. This curiosity should extend to education, and to every element and level of the school program. If industrial education is to take the lead in developing a vigorous technical frontier we must develop an attitude that favors, supports and cooperates in experimentation and innovation—not change for its own sake but change intended to lift the level of learning through industrial activities and to lift the type and kind of teaching being done by industrial educators!

For example, we need much more investigation of the nature of human abilities! We talk about the gifted child—and what do we mean? Usually we refer to a very narrow concept of giftedness—one measured by what appears to be an antiquated instrument—the I.Q. test. There is evidence that we are near another "breakthrough" in the science of human measurement.

Dr. Klausmeier in a new book to be published this month will say:[2] "Lack of complete information about the limits of human learning, and the range and variety of human abilities discourages some but excites others. Some are satisfied to be negative critics of present knowledge and psychological theories while others are not content to accept the status quo but try to move forward. New studies on the structure of the intellect indicate the possibility of 120 intellectual abilities. These abilities are not all identified as yet, and their meanings as applied to nontest performances are imperfect, but we cannot ignore the magnitude of human intellect. How much longer can we use tests of general intellectual ability, kindergarten through graduate school as a primary means of appraising the ability of the individual? The concept of *general* intellectual ability (Terman and others) is threatened by research now under way in several schools and laboratories."

A significant study is now underway with the joint sponsorship of the American Vocational Association, the U. S. Office of Education and Rutgers University. This study has as objectives (a) the discovery of what the *new* work world needs in new skills and knowledge; (b) how are *vocationally talented* youth identified and selected and (c) how are vocational programs being modernized to meet the new demands. The most important part of this study will probably be the development of a new image of vocational education and the "vocationally talented" youth are truly a part of the "gifted" group of American young people.

It is of interest to note here the inclusion in the study committee—which is headed by Dr. Franklin Keller of New York—two prominent Californians—Mr. Samuel L. Fick, Chief of the Bureau of Industrial Education, and Mr. Lee Ralston, Director, Practical Arts Education, Los Angeles County Schools.

The nature of ability is only one area that should challenge the curiosity of the industrial educator. True, this is one of the most damaging concepts when we consider the image of industrial education held by many—that the shop is the place for persons of low "ability"—they ignore the concept that there are *kinds* of ability as well as *degrees* of ability. But the industrial educator should also be curious about new teaching methods—can teaching machines be used in this area of education and if so, how can they be "programmed"? Likewise there should be a lively interest in curriculum research to determine the new knowledge and skill of the sixties that should find its way into the instructional program—and to discover the curricular deadwood that should be pruned out! It is also time we inquired into the problems of class size and group organization! Much of the new industrial and technological knowledge and skill may be effectively taught in large classes—or even self taught!

To again quote Dr. Coombs,[3] "One important reason

[1] Phillip H. Coombs: Sec. of the Fund for Advancement of Education; in the 27th Sir John Adams Lecture—UCLA 1960.

[2] Klausmeier, Herbert J., *Learning and Human Abilities*, Harper, 1961.

[3] Coombs, Phillip H., op. cit. p. 12.

no doubt, why we cling tenaciously to the security of old and familiar practices—and tend to shroud them in a mantle of mystical sanctity—is that our training as teachers has not equipped us for change. A young physicist is imbued in the course of his training with the spirit of challenging old concepts and of seeking radically new ones which will upset and displace the old. The future teacher is lectured and drilled on the best current practices but all too often carries away the notion that these are not only the best practices of the moment but the best ones for all time. If the new teacher does emerge from his training program with a spirit of adventure and experimentation it may be taken out of him soon on his first job."

As administrators of the industrial arts and industrial vocational programs of California you have a two-fold responsibility; first you must be willing to accept responsibility for the program you represent—including the urgent need for finding a better way to do the job; and second, you must find some way to encourage among your teachers the inquiring mind, the intellectual curiosity that leads to new programs, new environment, new methods, new horizons! You must help them live beyond the day to day routine and find challenge in the changes of the sixties—but at the same time you must be the balance wheel that will temper their dreams with reality—they should be encouraged to seek new heights—but there is no use of their getting into orbit!

SOME CONTEMPORARY STUDIES

The pilot of an industrial education craft should be aware of the many inquiries currently probing the mysteries of education.

A significant study is now under way as a joint effort of the

American Association of School Administrators
Association for Supervision & Curriculum Development
National Association of Secondary School Principals
N.E.A. Department of Elementary School Principals
N.E.A. Department of Rural Education

These five groups are examining the apparent shift toward impersonal solutions to vital educational problems. Mass grouping, standard curriculums, standard test scores, standard examinations, core offerings and disregard for kinds of ability except the narrowly defined "gifted" child. are some of the evidences of this drift toward standardization—and the excuse is found in "exploding population" and the necessity of finding more economical school patterns!

The warnings from these five groups are contained in a pamphlet just published under the title of LABELS AND FINGERPRINTS [4] which discusses *who* should learn *what*, and emphasizes that each youth must have the individual freedom to select vocational and personal goals for himself and pursue a course that will help him reach his goals.

The California Master Plan for Higher Education is another piece of significant planning that involves the philosophy of post-high school education and establishes guide lines for the expansion of the junior colleges, state colleges and the state university. This Master Plan assigns to the junior college the function of providing (among other services) instruction in vocational technical fields leading to employment! This plan which has been in large part implemented by legislation, recognizes the junior college and all of its services as *higher* education.

The California Master Plan also emphasizes the importance of vocational guidance as a function of the junior college. "The junior colleges shall provide counseling services sufficiently extensive to meet the needs of a non-selected group," and "The junior colleges will admit all graduates of California high schools who desire to continue their education and others whose maturity indicates potential success in post-high-school education." [5]

The junior college thus becomes the "open door" to higher education in the state—and must provide educational services appropriate to the needs and abilities of all California youth including the 35 per cent who will find their occupational goals in the industries of the west.

There is presently before the state legislature proposals to increase state aid for junior colleges and some state officials have proposed that such additional aid be given only for transfer (lower division) courses! This would be a serious discrimination against the occupational education of the junior college and would be a blow at the basic philosophy of this institution. Administrators and supervisors of vocational education should be alert to any such move to destroy the democratic nature of this most rapidly growing American education institution!

Several other studies are now in progress (or have been recently finished) which will have effects on the image of industrial education. Just to mention a few of which you, the leaders of applied education, should be aware: The California Citizens Advisory Commission on Public Education which recently presented a 104 point plan to overhaul the system of public elementary and high school education; the study and revision of teaching credentials, now before the legislature; studies of employment needs and training requirements in several areas of the state, etc.

The responsibility for being a part of such programs of study and research cannot be evaded by anyone who occupies a leadership position in the California public schools.

LEADERSHIP AND COMMUNICATION

Industrial education in California has been fortunate to have strong dedicated men and women who have provided a wholesome and dynamic leadership for the program! Is this going to be true in the next ten years? Will we recruit and train the people to take our places with the same enthusiasm that we tackled other problems in the past? Will we ourselves, grow as fast as the program we represent and as rapidly as the technical-industrial world we are serving?

Our leaders must be able to originate, direct, inspire, and scrutinize or evaluate; and not the least of these is the ability to originate—what we will need most in the next

[4] *Labels and Fingerprints:* prepared by the American Association of School Administrators (and four other associations) 1201 Sixteenth Street, N.W., Washington, D. C., 1961, 16 pages.

[5] A Master Plan for Higher Education in California—1960-1975—Published by California State Department of Education, 1960, pp. 208-209.

decade is a cadre of dynamic leaders who can conceive and develop new ideas, because the world we will live in tomorrow will not be the world we live in today—and if our industrial education is the same as it was last year we will be in a sorry fix. The preparation of leaders for tomorrow consists of pushing out the boundaries of ignorance! You need to learn not only what the job requires but how you measure up to the requirements—and what you can do to prepare yourself to meet the new challenges triumphantly!

Dh. Melvin Barlow of UCLA recently discussed the problem of self development of leaders and reduced the process to a formula—

$$SD = SA + P + P.A.$$

in which SD is the self development a leader must accomplish—SA is the self analysis he must be capable of—and be willing to do in an objective manner; P is the plan he must devise to get the added education, skills, understandings and judgments he will need to become an effective leader—and P.A. is the positive action necessary to make the plan a reality! This formula makes sense!

An executive must be able to face himself honestly—and profit by his mistakes. He cannot perfect his techniques as a spectator—he is the son of his own works! *His* development is *self* development!

One month of genuine research into your own wants, your capability, your personality and the power of your ambition, will be worth years of trying this and that in search of some elusive satisfaction. If there is any doubt in your own mind about your ability and instinct to be a leader, resolve it! You will never build the kind of an organization and program we need unless you are sure of yourself—confident you have a sound philosophy, and a belief in the job before you; and a patience and humility that permit you to gain the cooperation and confidence of those who work with you as teachers or students.

And this brings us to the problems of communication in leadership positions.

Communication seems to be on everyone's agenda for professional meetings—it is a word to conjure with these days—and shows up with increasing frequency in educational literature and the minutes of meetings such as this one! In its simplest form communication involves (a) a thought, idea, or feeling to be communicated, (b) its verbal or nonverbal expression by the sender, and (c) its apprehension and evaluation by the receiver!

It is obvious that the communication process permeates and largely determines the success of all aspects of administration, supervision, and teaching. Administrators have recently discovered its importance in maintaining good human relations and in securing a more accurate image of the school on the part of all and sundry.

Communication has a three-dimensional concept—up, down, and across. How do you discover the desires, attitudes and opinions of the Principal, the Superintendent—and the Governing Board? How do you find out the problems of the instructors under your supervision—and how do you let them know what is expected of them? How do you get along with those on the same organizational level? How do you reach students, parents, taxpayers and employers? The answers of course lie in one word—communication.

If industrial education is to fulfill its educational destiny we must first of all solve the problem of communication. Why do rumors, fears, gossip, often take over in the place of calm exchange of ideas—what are the problems of semantics? What's wrong with the language of the sender—or the leader? What part does emotionalism play in faulty communication? The following has been used by several writers as an example of language failure in communication:

A New York City plumber wrote to the Bureau of Standards in Washington saying he had found hydrochloric acid good for cleaning out clogged drains.

The Bureau wrote him:

"The efficacy of hydrochloric acid is indisputable, but the corrosive residue is incompatible with metallic permanence." The plumber replied that he was glad the Bureau agreed with him. The Bureau tried again. "We cannot assume the responsibility for the production of toxic and noxious residue with hydrochloric acid, and suggest that you use an alternative procedure." The plumber again wrote that he was pleased to find the Bureau agreeing with him. Finally the Bureau in desperation wrote "Don't use hydrochloric acid! It eats hell out of the pipes."

The supervisor must not only be an intelligent sender of communications, but he must be a good listener—you must look and see and listen! In all supervision—as well as in instruction itself—we must look for the "feedback"—as this is what gives us the bases for evaluating our communication and its effectiveness.

LEADERS HELP CREATE THE IMAGE

The image of industrial education is constantly being created, modified, distorted or clarified! The process of image building takes place in homes, in the classroom and shop, in club rooms, in offices, in conversation, in conference, in printed reports, on platforms, in the presses and other mass media, in the performance of students on the job, in the counselor's office, in board meetings, in commencement exercises, in exhibits and displays. It is an aspect of all phases of education—of all activities connected with industrial education—it is an unending series of actions and reactions.

Central to any plan of image creation is the leader; in this case the director of industrial education. His is a task of great magnitude because of the multiple "publics" he must consider, and the numerous means of communicating that he must utilize. He must know beyond mistake the makeup of his community and needs and opportunities for educational service. He must be able to explain his philosophy of work and of education—he must be able to show that liberal education is not something opposed to vocational education; but by intelligent planning it can be combined with and motivated by vocational education. He must know people and understand their motives—and this applies to students, teachers and industrialists. He must be a researcher with a curious mind ever alert for new techniques and broadened concepts of subject matter. He must be a fiscal agent, a counselor, an evaluator, a reporter, a missionary! He must find in his work a challenge to grow in helpfulness and insight and he must truly find pleasure in the success of others.

I cannot close these remarks without reference to the most illusive yet most important of all the responsibilities of the industrial educator—namely his responsibility for contributing to character building. We must deepen our

(Continued on Page 29)

AVA
55th ANNUAL CONVENTION

DECEMBER 2-8, 1961

PROGRAM AND NOTES

RESOLUTIONS REFLECT POLICY STAND

The resolutions adopted at the annual House of Delegates' meeting during the AVA convention should reflect the position of the membership regarding important matters affecting vocational and practical arts education. Individual members, affiliated and associated organizations should make their position on matters relating to vocational and practical arts education known to members of the AVA Resolutions Committee. It is suggested that AVA affiliated and associated organizations who wish a resolution adopted, draft such a resolution and submit to the Chairman of the AVA Resolutions Committee or to the member of the committee representing the requestor's respective division, prior to December 1, 1961.

Policy matters and positions which are taken by a professional organization are of far reaching influence and will have tremendous impact upon the development of the program. You, as individual members, are urged to give much thought to the resolutions needed and to respond to this request.

Members of the Resolutions Committee are:

Chairman:	John L. Ferguson Associate Professor of Education University of Missouri Columbia, Missouri
Agriculture:	Carl M. Humphrey, Director Agricultural Education State Department of Education Jefferson Building Jefferson City, Missouri
Business Education:	Mildred Blair 2220 Country Club Avenue Omaha, Nebraska
Distributive Education:	Mrs. Etta Dorn, State Supervisor State Department of Education Wade Hampton Office Building Columbia, South Carolina
Home Economics:	Mary Bell Vaughan Asst. State Director of Home Economics State Department of Education Frankfort, Kentucky
Industrial Arts:	Rupert L. Evans, Chairman Industrial Education University of Illinois Urbana, Illinois
Trade & Industrial:	Ernest G. Kramer, Assistant Chief Bureau of Industrial Education State Education Building 721 Capitol Avenue Sacramento 14, California

VOTING MACHINES

Delta Power Tool Division, Rockwell Manufacturing Company, will again provide the Association with two voting machines for use at the Kansas City Convention. Last year's Convention goers will recall that these voting machines were used to pick up information which helped guide development of the AVA Program of Work.

REGISTRATION REGULATIONS

AVA members should read carefully the following regulations approved by the AVA Executive Committee regarding convention registration.

"Effective with the 1961 Convention all persons showing credentials of AVA membership shall pay a $3.00 registration fee. All other vocational and practical arts personnel without membership credentials shall be required to purchase a direct membership of $6.00 and, in addition, pay the regular registration fee of $3.00. All other persons, with the exception of exhibitors, specially invited guests, and program participants, shall be required to pay a registration fee of $3.00."

AVA CONVENTION BANQUET

Smorgasbord and Entertainment
Wednesday, December 6, 1961, 7:30 P.M.
Ballrooms, Muehlebach Hotel

Order your banquet tickets early! Buy a complete table of 10 for you and your friends.

Assignment to tables will be made in the order in which the requests for tickets are received. Preferred seating will be given to earliest orders. If you order 10 tickets, your party will be assigned to one table.

Order tickets at $6.00 each from Mrs. Frances Kerley, Director, Homemaking Education, Board of Education Building, 1211 McGee (Room 410), Kansas City, Missouri. Check or money order made out to Mrs. Frances Kerley must accompany each order.

All orders received prior to November 22 will be honored as pre-convention sales. Tickets will be sent to you. Orders for tickets after November 22 may be picked up at the meal function ticket sales booth.

Only 700 tickets will be sold. People will be accommodated in two adjoining ball rooms. After the meal tables will be removed from the Grand Ballroom and everyone seated for the entertainment.

Outstanding professional entertainment is being furnished by the SHIP (commercial exhibitors). The SHIP has employed some of the best entertainment to be found in the Midwest. We are sure that you will enjoy a very delightful and entertaining evening.

Plan to attend this function!

ORGANIZATION MEN (AND WOMEN)

Any undertaking as large as the Kansas City Convention needs a whole regiment of chairmen, directors, organizers, logicians, magicians, statisticians, and people to arrange the countless thousands of details. Here are the people who are responsible for seeing the annual meeting is put together the right way:

Chairman: James A. Hazlett, Superintendent of Schools, Kansas City, Mo.

Assistant Co-chairmen: Hollis W. Dahlor and Verne L. Pickens, Kansas City, Mo., School District.

T. Gardner Boyd, budget and finance.

Albert Wood, registration and housing.

Esther Prevey, courtesy, entertainment, hospitality, visits, tours.

L. E. Falgren, publicity and exhibits.

Merle W. Bodine, meal functions, room schedules and facilities.

N. C. Crouch, Ship Deck Officer.

Divisional program chairmen, those charged with seeing their division programs are lined up, organized, and executed properly, are as follows:

Agriculture: G. F. Ekstrom, University of Missou i

Business: H. D. Shotwell, Kansas State Board f Vocational Education

Distributive: Custer McDonald, Missouri State Department of Education

Home Economics: Elizabeth Simpson, Universty of Illinois

Industrial Arts: William J. Micheels, University of Minnesota

Trade and Industrial: Merton Wheeler, Missouri State Department of Education

Vocational Guidance: Neil Wodder, Nebraska Occupational Information and Guidance Service.

Arrangements for the Convention were coordinated at the AVA headquarters by the ubiquitous Lowell A. Burkett.

FOR WIVES ONLY

An interesting program is being planned for the wives of AVA members who come to Kansas City. The highlights are:

1. A tour of the Hallmark Card Company.
   Hallmark Cards is the world's leading greeting card firm with its international headquarters located in a sparkling nine-story glass and metal building in Kansas City. Those who go on this tour will see many types of craftsmen who are designing, manufacturing, and assembling greeting cards, gift wrappings, and home and party decorations. Some 350 artists are employed in the art department. This tour will be held Tuesday morning, December 5.
2. A card party, Monday afternoon, December 4, will provide the opportunity to renew and make new friendships.
3. The group will be taken on a tour of the Truman Library and Museum on Thursday morning, December 7. This building is outstanding with a wide variety of object's of interest, including an informative exhibit on our governmental structure and functions. There is even a replica of the Presidential Office.
4. A luncheon will be held at noon on Thursday, December 7, at which time there will be a short discourse on the philosophy of hats. No one will want to miss this talk which will give a new slant to an ever-present interest.
5. Time will be allowed for shopping. The Kansas City shops are beautiful at Christmas time. No better stores could be found for purchasing gifts for friends and relatives or for sightseeing.
6. Everyone, even the men, will want to see the Plaza Lights. These and the Christmas decorations have made Kansas City famous. They are worth the trip.

LIVING OUT OF A SUITCASE? SLEEPING IN A 'PHONE BOOTH?
A HOTEL ROOM WILL BE MORE COMFORTABLE
DON'T FORGET TO MAKE A HOTEL RESERVATION—NOW!
(Use Form Inside Back Cover)

GENERAL SESSIONS

Monday, December 4, 8 PM: Opening General Session

Platform guests: Past Presidents of AVA, members of the Executive Committee, and General Chairman for the Kansas City Convention.

Presiding: William B. Logan, President, American Vocational Association, Professor of Education and Director of Distributive Education Institutes, The Ohio State University.

State Association Membership Awards: Ruth Stovall, Chairman of the AVA Membership Committee and State Supervisor of Home Economics Education, Montgomery, Ala.

Introduction of Speaker: John A. Jarvis, AVA Vice President representing Industrial Arts Education and Dean, School of Industrial Education, Stout State College.

Address: The Honorable Abraham A. Ribicoff, Secretary of Health, Education and Welfare, Washington, D.C.

Tuesday, December 5, 8 PM: Second General Session

Special Guests: Life Members and Presidents of Affiliated State Associations

Presiding: F. J. Konecny, AVA Vice President representing Trade and Industrial Education and Executive Assistant, Texas Engineering Extension Service, College Station, Texas.

Presentations:

Life Membership Certificates: E. M. Claude, Past President, American Vocational Association and Chief Assistant Director, Trade and Industrial Education Service, Springfield, Ill.

AVA Awards: H. W. Sanders, Chairman, AVA Awards Committee and Head, Department of Vocational Education, Virginia Polytechnic Institute, Blacksburg, Va.

Introduction of Speaker: Louise Bernard, AVA Vice President representing Distributive Education and State Supervisor of Distributive Education, Richmond, Va.

Address: Dr. Sterling M. McMurrin, U.S. Commissioner of Education, Washington, D.C.

Wednesday, December 6, 7 PM: AVA Banquet (Smorgasbord). For information on tickets see Page 14.

Thursday, December 7, 8 PM: AVA House of Delegates

Presiding: William B. Logan

Roll Call of Delegates: M. D. Mobley, Executive Secretary, American Vocational Association

Minutes of House of Delegates meeting at Los Angeles, 1960 AVA Convention: M. D. Mobley

Report of the Treasurer

Report of the Auditing Committee

Report of the Executive Secretary

Report of the President

Presentation of Certificates to past members of the AVA Executive Committee: Charles W. Sylvester, Treasurer, American Vocational Association, Baltimore, Md.

Unfinished business

New business

Report of the Resolutions Committee

Report of the Nominating Committee

Election of Officers

Friday, December 8, 1:30 PM: The Ship's Program

Presiding: Lowell A. Burkett, Assistant Executive Secretary, American Vocational Association, Washington, D.C.

Deck Officer: N. C. Crouch, Brodhead-Garrett Company, Cleveland, Ohio

Share the Plunder I

Presentation of the SHIP'S Citation: Gene Bellezzo, Duro Metal Products, Chicago, Ill.

Share the Plunder II

AVA Exhibitor Awards: Lowell A. Burkett

Share the Plunder III

ASSOCIATED ORGANIZATIONS

National Association of State Directors of Vocational Education

Friday, December 1, 1 PM: General session and panel
8 PM: AVA Activities, program and plans
Saturday, December 2, 9 AM: Title VIII programs and problems
1:30 PM: Research on Vocationally Talented Pupils
Sunday, December 3, 1:30 PM: Address and panel
7:00 PM: Joint Meeting with National Council of Local Administrators
Monday, December 4, 9 AM: General meeting
12:00 Noon: General State Directors luncheon
2 PM: Business meeting

American Technical Education Association

Sunday, December 3, 3 PM: Meeting of Trustees and Advisory Council
8 PM: "A Look Ahead in Technical Education"
Monday, December 4, 9 AM: "Plans for Expanding Technical Education"
11 AM: Business meeting
12:15 PM: Luncheon meeting
2 PM: "Meeting the Challenge"
Tuesday, December 5, 2 PM: Joint meeting with National Association of Industrial Teacher Educators. Committee reports on recruitment and standards

National Council of Local Administrators of Vocational Education and Practical Arts

Sunday, December 3, 9 AM and 2 PM: Executive Board Meeting
7 PM: Joint Meeting with State Directors
Monday, December 4, 9 AM: General meeting. "Relationship of National Council to Local Councils"
2 PM: General meeting. "Training and Retraining"
Tuesday, December 5, 12:15 PM: Luncheon and business meeting
2 PM: Joint meeting with National Association of State Supervisors of Trade and Industrial Education

Conference of Officers of Affiliated State and Territorial Associations

Monday, December 4, 7:30 AM: Breakfast meeting. "The AVA and You," Dr. M. D. Mobley. Also a panel discussion on techniques used in promoting AVA membership.
Wednesday, December 6, 9 AM: State association public information programs
Thursday, December 7, 2 PM: Business meeting

AGRICULTURAL EDUCATION

Wednesday, November 29, 7:30 PM: NVATA Executive Committee meeting

Thursday, November 30, 8:30 AM, 1 PM, 7:30 PM: NVATA Executive Committee meeting

Friday, December 1, 8:30 AM, 1 PM, 7:30 PM: NVATA Executive Committee meeting

Saturday, December 2, 9:15 AM: NVATA General Session
10:45 AM: NVATA special program
1 PM: NVATA first regional meetings
6:30 PM: NVATA State Presidents Dinner

Sunday, December 3, 1:15 PM: Second General Session of NVATA
4:30 PM: Reception, combined Agricultural Education groups

Monday, December 4, 8:00 AM: Divisional committee meetings
10 AM: NVATA second regional meetings
1:30 PM: Combined Agricultural Education groups, a symposium on "Effect of Economic and Sociological Changes"
4 PM: Executive Council meeting

Tuesday, December 5, 7 AM: Breakfast Sponsored by Consumers Cooperative Association
9 AM: Combined Agricultural Education groups visit commercial exhibits
12:15 PM: International Harvester luncheon for state supervisors, teacher trainers, vocational agriculture teachers and wives

2:15 PM: Combined Agricultural Education groups, address
3:30 PM: Business meeting
4:30 PM: Editing-Managing Board, *Agricultural Education* magazine
6 PM: Dinner meeting, Editing-Managing Board

Wednesday, December 6, 7 AM: NVATA breakfast and final meeting
7:30 AM: Breakfast meeting and program for state supervisors
7:30 AM: Breakfast meeting and program for teacher trainers
10:45 AM: Joint session, supervisors and teacher trainers
12:30 PM: combined agricultural groups, agriculture tour

Thursday, December 7, 8:30 AM: combined Agricultural Education groups, address
10 AM: combined Agricultural Education groups, symposium on "Planning Programs of Agricultural Education to Meet School and Community Needs"
12:15 PM: A & P luncheon for state supervisors, teacher trainers, vocational agriculture teachers, and wives
2:15 PM: combined Agricultural Education groups, a symposium on "Adapting Vocational Agriculture to Meet Changes in Farming"

Friday, December 8, 8:30 AM: combined Agricultural Education groups, a meeting including a symposium on "Problems of Communication," also closing business session and summary of program.

BUSINESS EDUCATION

Tuesday, December 5, 9:30 AM: Business Education Policy and Planning Committee
1:30 PM: a joint session with Distributive Education

Wednesday, December 6, 9:30 AM: "Looking Ahead in Business Education"
1:30 PM: National Association of Supervisors of Business Education, an open meeting.
2:30 PM: "Making Business Education Teaching Realistic for Tomorrow's Needs"

Thursday, December 7, 9:30 AM: "Broadening and Upgrading Business Education Offerings"
1:00 PM: visiting commercial exhibits or a field trip

Friday, December 8, 9:30 AM: "Automation"

DISTRIBUTIVE EDUCATION

Sunday, December 2, 9:30 AM and 2 PM: DECA Board of Trustees

Sunday, December 3, 1:30 PM: NADET Executive Committee
1:30 PM: NASSDE Executive Committee

Monday, December 4, 9 AM and 2 PM: Distributive Education Policy and Planning Committee

Tuesday, December 5, 9 AM: "Education for Marketing and Distribution." Keynote speaker, Hugh E. Muncy, Illinois Retail Merchants Association. A panel discussion will follow the speaker.
1:30 PM: continuation of the morning program. Speaker, Bill Stoner, National DE Student of the Year. A panel discussion will follow the speaker.

Wednesday, December 6, 7 AM: American Hotel Association and National Restaurant Association invitational breakfast
9 AM: Annual meeting of Council of Distributive Teacher Educators
9 AM: National Association of State Supervisors of Distributive Education
9 AM: National Association of Distributive Education Teachers
1:30 PM: joint meeting of NADET and NASSDE

Thursday, December 7, 9 AM: Business meeting
12 PM: DE luncheon meeting
2:00 PM: DE Division visit commercial exhibits
5 PM: Reception sponsored by a group of nationwide retail companies

Friday, December 8, 8 AM: Distributive Education Clubs of America, Inc.
9:45 AM: Council of Distributive Teacher Educators. Theme "Needed Improvements in Distributive Teacher Education"

GUIDANCE

Monday, December 4, 9 AM: Vocational Guidance Division business meeting
2 PM: A session featuring Paul Polmantier speaking on the Philosophy of Guidance

Tuesday, December 5, 9 AM: A session featuring the role of private vocational schools and post high school plans of our youth
2 PM: A counseling demonstration

Wednesday, December 6, 9 AM: Theories of Occupational Choice
2 PM: Occupational information, building up a resource file

Thursday, December 7, 9 AM: Occupational information—materials available, needs and sources of information, dissemination to counselors.
2 PM: A visit to a large Kansas City high school

Friday, December 8, 9 AM: Visit commercial exhibits

HOME ECONOMICS EDUCATION

Monday, December 4, 9:30 AM, 2 PM: Policy and Planning Council meeting

Tuesday, December 5, 9:30 AM: "Our Tasks, Problems and Challenges in the 60s"
1:30 PM: Division Business session
4 PM: Social Hour

Wednesday, December 6, 9 AM: National Association of Vocational Homemaking Teachers. Theme "Depth in Teaching".
9-11:30 AM: National Association of Home Economics Supervisors. Theme "Home Economics Education Faces the Challenges of the 60s".
9-12 AM: National Association of Teacher Educators of Home Economics. Theme based on international understanding and needs of special groups.
12:00: Combined luncheon for State Supervisors, Teacher Educators and Teachers
1:30-4 PM: NASSHE meeting. Current supervisory problems and business meeting
2-4 PM: NAVHT meeting. Panel "Our Challenge"
2-4 PM: NATEHE meeting. Theme based on the mentally gifted and handicapped. This will also be a business meeting.

Thursday, December 7, 9 AM: Visit commercial exhibits
1 PM: Meeting featuring the theme "Continuing Education in Home Economics". Also a panel on practices in adult education.

Friday, December 8, 9-11:45 AM: Meeting featuring the theme, "What Areas in Our Program Need Strengthening?" Also a symposium on teaching in depth.

INDUSTRIAL ARTS EDUCATION

Monday, December 4, 9:30 AM: Industrial Arts Supervisors meeting

Tuesday, December 5, 9:30 AM: The Development of Marketable Skills in Industrial Arts Programs.
1:00 PM: Visit commercial exhibits

Wednesday, December 6, 9 AM: Industrial Arts Division business meeting
10:30 AM: Industrial Arts Education Division Research Committee meeting
2 PM: Industrial Arts and Other Areas of the School Curriculum

Thursday, December 7, 9:30 AM: Industrial Education in Special Education Programs. Keynote speaker. Also speakers on gifted students, deaf students, blind students, maladjusted students, mentally retarded students, and physically handicapped students.

2-4:30 PM: Debate, "Resolved that Industrial Arts, Trade and Industrial, and Technical Offerings be Organized as a Single Department in a Comprehensive High School."

Friday, December 8, 9-11:30 AM: Enlarging Developments in Industrial Arts. Topics under discussion will include instructional units, teaching machines, the Peace Corps, and reorganization in the junior high school.

TRADE AND INDUSTRIAL EDUCATION

Saturday, December 2, 9 AM and 2 PM: T & I Policy and Planning Committee

Sunday, December 3, 2 PM: National Association of State Supervisors of Trade and Industrial Education, a business meeting

8 PM: National Association of Industrial Teacher Educators, a business meeting

8 PM: NASSTIE meeting, "Training for Redevelopment—A Progress Report"

Monday, December 4, 8 AM: T & I Policy and Planning Committee

9 AM: NAITE Research meeting

2 PM: NAITE, NASSTIE, and Women's Section joint meeting

Tuesday, December 5, 7 AM: NAITE breakfast and business meeting

9:30 AM: First General Session, "Goals and Trends in Industrial Employment"

2 PM: Joint meeting of NAITE and American Technical Education Association

2 PM: Joint meeting, NASSTIE and National Council of Local Administrators, "Evaluation and Accreditation of Vocational Education"

Wednesday, December 6, Areas of Instruction— meetings

9:30 AM: Women's Section. Health occupations. "Training Assistants for Selected Health Services"

9:30 AM: "Electronics and Instrumentation"

9:30 AM: Automotive, "Progress Through Cooperation"

9:30 AM: Construction trades, "Changing Nature of the Construction Trades"

9:30 AM: Supervisory training

12:15 PM: Women's Section luncheon

1:00 PM: Visit commercial exhibits

2:00 PM: Policy and Planning Committee meeting

Thursday, December 7, 8 AM: Policy and Planning Committee meeting

9:30 AM: Second General Session, "Our Role in Achieving Goals", Dr. John P. Walsh, USOE

2 PM: Areas of Instruction—meetings

2 PM: Apprenticeship

2 PM: Practical nurse training, "Training Needs in an Ever-expanding Health Program"

2 PM: New technical areas—Nuclear Technology, Data Processing, Mechanical Technology

2 PM: Graphic arts

2 PM: Cooperative programs, "Instructional Materials for Part-time Cooperative Programs"

Friday, December 8, 9:30 AM: Third General Session featuring a symposium on "Implementation of Industrial Manpower Trends and Goals"

SPECIAL AVA GENERAL COMMITTEE PROGRAMS
(All interested persons are urged to attend)

International Education

Thursday, December 7, morning and afternoon sessions, Edward Berman, International Cooperation Administration, chairman. Speakers are Robert Dolley of ICA, John Flanagan of the University of Pittsburgh, Robert VanDuyn of the Peace Corps.

Research

Thursday, December 7, 2 PM: "Improvement of Research in Vocational and Practical Arts Education," Rupert N. Evans.

"The Cooperative Research Program of the U. S. Office of Education . . . ," by Dr. David Clark.

"Research Design, with Special Emphasis on the Hawthorne Effect," Dr. David Clark.

Safety Education

Wednesday, December 6, 8:15-8:45 AM: "What Industry Expects of the High Schools . . . ," Howard Warzin, Trans World Airlines

Friday, December 8, 8:15-8:45 AM: Film, "It's Up to You." James E. O'Neill, National Society for the Prevention of Blindness.

AVA GENERAL COMMITTEE MEETINGS

AVA Membership Committee and Divisional Membership Committees
Monday, December 4, 2:00 P.M.
AVA-BAT Joint Committee
Friday, December 8, 10:00 A.M.-12:00 Noon
AVA Awards Committee
Monday, December 4, 8:30 A.M.-12:00 Noon
Labor-Management Relations Committee
Wednesday, December 6, 9:00 A.M.-12:00 Noon
Thursday, December 7, 2:00-5:00 P.M.
National Advisory Council, Iota Lambda Sigma
Tuesday, December 5, 2:00-4:00 P.M.
Public Information Committee
Saturday, December 2, 2:00-5:00 P.M.
Sunday, December 3, 9:00 A.M.-5:00 P.M.
Research Committee
Thursday, December 7, 9:00 A.M.-12:00 Noon
Ship's Business Meeting
Wednesday, December 6, 3:30 P.M.
Vocationally Talented Pupils
Wednesday, December 6, 2:00-4:00 P.M.

SPECIAL MEAL FUNCTIONS

AVA Wives (Luncheon)
Thursday, December 7, 11:30 A.M.-3:00 P.M.
AVA Past Presidents and Executive Committee (Luncheon)
Wednesday, December 6, 12:30 P.M.
Canadian Vocational Association (Luncheon)
Wednesday, December 6, 12:30 P.M.
Iota Lambda Sigma (Dinner)
Thursday, December 7, 6:00 P.M.
School Shop Editorial Advisory Board (Breakfast)
Thursday, December 7, 7:45 A.M.
Stout Alumni Reunion (Dinner)
Thursday, December 7, 6:30 P.M.—The Wishbone, 4455 Main, Kansas City, Mo.

SPECIAL PROGRAM
GENERAL SCHOOL ADMINISTRATORS

Wednesday, December 6, 2 P.M.:
Chairman: Roi S. Wood, Superintendent of Schools, Joplin, Mo.
Greetings: James A. Hazlett, Superintendent of Schools, Kansas City, Mo.
Panel Discussion Topic: "Implications for Vocational Education in the Age of the Astronaut"

1. "The Cooperative Vocational School"—Ed C. Ralston, Superintendent, Lead Belt Technical School, Bonne Terre, Mo.
2. "The Vocational School in Cities of 25,000-50,000"—R. W. Baker, Director of Vocational Education, Joplin, Mo.
3. "The Vocational School in Cities of 50,000-100,000"—David W. Berryman, Director, Vocational and Industrial Education, Springfield, Mo.
4. "The Vocational School in the Large City"—Raymond J. Sacks, Principal, O'Fallon Technical High School, St. Louis, Mo.
5. "What Vocational Training Can Do for Industry"—Paul Custer, Manager, Missouri Division of Employment Security, Joplin, Mo.

Panel Discussion Chairman: Howard M. Terry, Superintendent of Schools, Bonne Terre, Mo.

BE SURE YOU'RE ONE OF THE
3,000
AT KANSAS CITY, DECEMBER 2-8, 1961

The Relationship of Industrial Arts To the Curriculum

Wayne D. Coleman
Eastern Illinois University

Paul W. Davis
Detroit Public Schools

Robert R. Wallberg
Duluth Public Schools

In general education there are subjects which deal in theory and abstractions while others, particularly industrial arts, deal with practical applications of scientific and technological principles. Industrial arts is the subject that brings meaningful application to the theories and abstractions stressed in the more academic courses.

Historically the industrial arts movement has been recognized for the educational process meaningful to students. Industrial arts offers unique opportunity, as no other subject area can, for the practical application of principles which are taught, *but not always learned or understood,* in other subjects. This article is concerned, therefore, with specific examples of units and activities in the curriculum that provide opportunity for the application of experiences and information essential for practical reasoning and problem solving.

An important Harvard report emphasizes the importance of industrial arts in general education. It points out, for example, that the lack of practical industrial arts experiences is, "at present, a most serious deterrent to entry into all types of technological work and to college and post graduate training in science, medicine, and engineering."[1]

It should be the responsibility, then, of industrial arts teachers to teach students to develop competencies that will aid them in achieving such practical ends. To do this, industrial arts teachers should help "structure" the problems arising in the laboratories so students become cognizant of basic scientific and technological principles and their application in the solution of the problem under study.

A study by Leslie W. Trowbridge, *A Comparison of Objectives in Two Types of Physics Courses,* compared the approach between the Physical Science Study Committee course, and the traditional courses in high school physics. It is of interest to those in industrial arts to note that under the traditional objectives the first item listed states the objective, "To teach the applications of physics principles to modern technology and to devices common in the life of the student."[2] Traditional objective number eleven purports "to help the student become a more intelligent consumer of the products of modern technology."[3] These are both objectives that are compatible with our industrial arts philosophy. The approach, however, of the Physical Science Study Committee, is radically different. It states for their second objective, "Emphasis on physics concepts rather than on technological applications."[4] Herein it can readily be seen that the problem of relating the industrial arts to other subjects is going to be increasingly relegated to the realm of the industrial arts teacher. A challenge which they must accept as their responsibility.

The following list suggests ways in which the relationship between industrial arts and other subjects may be strengthened:

In general, industrial arts teachers should:

1. Always be on friendly and cooperative relations with other teachers.
2. Consult with other teachers, as soon as possible, to identify and define teaching units where there could be joint responsibility. Usually other teachers are willing and anxious to cooperate, so the industrial arts teacher can plan for the practical application.

In general, administration should be encouraged to:

1. Arrange industrial arts teachers programs with available time to work with non-industrial arts students.
2. Make it possible for the more able students to schedule both industrial arts and the subjects where scientific theory and technological principles are introduced.

In relation to art, industrial arts should:

1. Encourage an awareness and use of the principles of good design in the creation of an instructional activity.
2. Provide an opportunity for creativity with the most appropriate materials.
3. Encourage an awareness of, and functional application of, the principles considered basic to good design.

In relation to English, industrial arts should:

1. Require correct spelling, grammar, and reasonable thought organization in written work.
2. Teach the student to become aware of the importance of proper oral and written communication.
3. Encourage proper oral communication.
4. Encourage the systematic search, selection, and use of resource materials.
5. Encourage the systematic search, selection, and presentation of re-

(Continued on Page 31)

[1] Harvard Committee on the Objectives of a General Education in a Free Society, *General Education in a Free Society,* Cambridge, Mass.: Harvard University Press. 1958, p. 160.

[2] The University of Michigan, *School of Education Bulletin,* November 1, 1960, Volume 32, Number 2. p. 28.

[3] Ibid. p. 28.

[4] Ibid. p. 29.

SUPER-VISION

Eugene L. Dorr
Arizona Department of Vocational Education

Kenneth L. Rowe
University of Arizona

Business functions for the primary purpose of making a net profit. All people in a business soon realize this singleness of purpose. Likewise in education, the primary goal of *all* people involved with the educational process is to influence student learning. Everything involved with the supervisor's activities then must be directed toward the end result of better student learning.

Supervisors often are overburdened with increased enrollments, double sessions, reports, budget deadlines, grading periods and large classes. Here are only a few of the neon lights that are flashing on and off in our contemporary situations — danger signals creeping in to detour, if possible, what should be our ultimate goal—the education of youth. These are necessary functions of the supervisor's total responsibility; however, do these detours too often use valuable time that might be devoted to leadership? Could a supervisor be of greater help in influencing student learning by decreasing the number of detours?

We go to great lengths and time to check job descriptions and machine specifications to meet certain requirements, yet we may quickly place a *teacher* not fully equipped in human talents and educational abilities to guide and influence students in general business classes, classes where they are first influenced and introduced to the whole field of business. Why do we as supervisors often neglect the human machine? A regular maintenance schedule is set up to be performed periodically on all machines and equipment in the industrial plant, and yet the most important machine of all, the human machine, is neglected. Are supervisors doing the necessary maintenance to gain the best performance from the human machine involved in business education?

What then constitutes good supervision? George D. Halsey described his ideas in his book, *Supervising People*, as shown in the table below.

The chart shows the learning process in education. Teachers supervising students use this constantly and supervisors recommend it. Do supervisors continue to use this same learning program? Or do we become involved in problems that hold us back from our goals?

Perhaps a supervisor needs to develop a mental image of himself. The image should be in clear focus and illustrate the best in the supervisor's relationships. Goals need to be distinct so that your supervisory image is also obvious to others.

Goals are not easily obtained because of detours that constantly confront us. With an image established, we should be able to sidetrack the pitfalls ahead through good planning and clearly defined goals. What could be part of the make-up of our supervisor's image?

Human inertia is a universal law of all things on this earth. Humans have a natural reluctance to new ideas and ways of change. Many of us would like to modify some of the ways which human nature uses to express itself and we try to do so by teaching people, by making rules or laws. We think we

make better people that way. But human nature itself cannot be changed. It may be understood, it may be guided,

it may be directed, it may be led, it may be controlled, but it cannot be changed.

Planning and coordination are vital if good group inter-play, support and purpose is to be developed. Developing team play that includes the business teachers, guidance personnel, and school administrators all calls for planning and coordination. Combining talents and actions brings about more realistic outcomes with better support for actions that will follow.

Short- and long-term planning is vital to proper coordination of any proj-

ect. A plan, well organized and developed, calls for and allows for proper coordination of time and effort.

Creative thinking must be part of the total image. This is one of the

major elements that helps to defeat human inertia. Here is the development of resourcefulness. New ideas are initiated for experimentations. Goals are worked out so that motivation is developed by the group and through individual action. Creative thinking, then, will be done individually as well as in groups. Supervisors of other areas of education will need to be consulted for their ideas and plans. Local school district personnel will often supply the necessary stimulus for experimentation. Ideas that are pooled will normally kindle additional concepts and projections for serious consideration.

Good communications are vital to a well-planned and coordinated ac-

tivity. Communications must be two-way in nature with careful and serious consideration given to *all* items.

The grapevine may be useful, but is not always accurate—rumors and idle gossip unite to defeat team action. Unity and cooperation are the traits necessary to build a strong progress-minded program. Avoid these detours by keeping the channels of two-way communication open at all times. Be a good listener—this is the mark of a good conversationalist and will result in better programs as well as individual communications.

Enthusiastic participation is the temperature of the *esprit de corps* of the total program. Enthusiasm is highly contagious; it breeds enthusiasm. Negative attitudes breed negative responses. Where *all* lines of communication are kept open, the climate is more favorable for development of enthusiastic participation by *all*.

If you have established good rapport, this enthusiasm will be absorbed

by those around you, resulting in increased efficiency of operation.

Your energy and enthusiasm will exemplify the image you want to create and will radiate to those around you through good channels of communication.

Professional growth for yourself and the program is developed when people are part of a program and know it! When people stop growing professionally, they become part of the problem. The supervisor must be chal-

lenged to create the type of professional image that will be an inspiration to others. Memberships in local, state and national organizations are only concrete action *indicating* professionalism. The intangibles of being professional more often speak the loudest for creating the image others have of you the supervisor.

In summary, then, *Super*-vision calls for talents that stretch the imagination, captivate the minds of people and instill the stimulus to overcome human inertia. The projected image of the supervisor that is developing a program of vision, is taking shape and coming clearly into focus.

Have you a definite image of *your* supervision? Do those around you share a similar image of *your* goals? Perhaps an inventory of your efforts and talents is needed.

Successful supervision will help create a better, more complete and challenging student learning situation. This *is* the major purpose of all education.

SUPERVISION IS

What		*How*		*Purpose*
Selecting Interesting Teaching Measuring Rating Correcting Eliminating Commending Rewarding	PEOPLE	Fairly Patiently Tactfully	IN ORDER TO CAUSE THEM TO DO THEIR ASSIGNED TASKS.	Skillfully Accurately Intelligently Enthusiastically Completely

(Supervisory People, by George D. Halsey, Revised 1953, Harper & Bros. Publishers, New York.)

We are indebted to Miss Helen Ure, Arizona State Vocational Educational Department, for the clever illustrations which accompany this article.

Students from Distributive Education Class interviewed residents of every fifth home.

By George A. Chambers

Research Study Provides a Challenging Service Project

Why has industry failed to locate in our community? What percentage of people in outlying areas shop in our community?

Questions similar to these are common in most communities; thus creating a need and interest for information regarding public opinion, community attitudes, community services and marketing practices. In fact, some communities would gladly pay a nominal fee for basic research because officials do not have time to conduct a research study.

Some service research project is readily available for your vocational class or club—all you have to do is ask. The following summary illustrates how one distributive education class conducted a service research project.

Informal visits with members of the Distributive Education Advisory Committee revealed their interest in helping determine why industry might not locate in Washington, Iowa (Population: 5900). An important criteria for industry location in a community is community attitude. The advisory board members and an industrial corporation were interested in determining knowledge, desire, and awareness of local citizens regarding industry and industrial growth.

With these points in mind, it was decided to survey the city using the distributive education class. The class members voted to conduct the survey as a DECA project with the proceeds to be used by the local club for its activities. They agreed to organize, conduct and write a summary report of the survey.

Purpose. The purpose of the survey was to ascertain within the community:

1. Desire of local citizens for new industry.
2. Awareness of local citizens regarding industrial growth benefits.
3. Community knowledge about the city's present industry.
4. Attitudes of local citizens regarding schools, churches, industrial sites, recreational sites, housing, and utilities relative to industrial attractions.
5. The size, kind, and type of industry preferred.
6. Opinions of local citizens concerning why industry might not locate in the community.
7. Any additional information which could be drawn from the above six points.

Procedure. The procedure for conducting the survey was developed by the distributive education class. The basic questions to be asked during the interview were prepared by the Chamber of Commerce, D.E. Advisory Committee and the D.E. coordinator. Later the questions were reviewed by the class, and minor corrections made. The current city directory was used to determine the residential homes to be surveyed, and every fifth home in the directory was selected. In addition, seventeen managers of retail stores, forty retail and fifteen industrial workers were interviewed on the job. It was believed this sampling procedure would yield valid findings.

The students were given instruction in class concerning (1) the importance

of the survey, (2) the proper approach to the person being interviewed, (3) interviewing techniques, (4) the use of a random sample and random sampling technique, and (5) individual assignments relating to conducting the survey.

The survey and tabulation of answers required 516 hours of work with the average class member's hours totaling 29.

Findings. The answers to the 409 completed questionnaires were tabulated according to the age, sex, and occupation of the person interviewed by the class. A duplicated sheet of the questions and answers was prepared and distributed to the class. The members of the class were divided into three groups for the purpose of reviewing the findings of the survey. Each committee reviewed the findings, made written recommendations, and presented an oral report based on its work.

The analysis based on those interviewed revealed such important facts as: (1) that 99 per cent wanted new industry, (2) 79 per cent had definite ideas why industry might not locate in Washington, (3) two occupational groups were not aware of present industry and industrial growth benefits, (4) over two-thirds wanted industry brought in from outside, as opposed to locally started, (5) 94 per cent favored a corporate branch to an independent industry, (6) housing and utilities were the least attractive industrial attractions, and (7) in general, people were not satisfied with Washington's present industrial growth or efforts being made to attract new industry.

Benefits of Research Projects. Possibly the greatest benefit of the survey was achieved from the students' discussion of possible methods to use in solving the problems they had discovered. Each committee was required to present and defend its recommendations. The recommendations of the committees were reviewed and a master recommendation list prepared. The entire survey procedure, findings, and recommendations were duplicated and distributed to the class, Chamber of Commerce, and Industrial Board.

Students, businessmen, and community leaders are interested in research projects. Students develop a keen interest in research and problems they discover because they are part of the solution to the problem. The interest shown by the community and students in Washington, Iowa, has led the distributive education advisory committee to select a research project for next year's class. A service research project provides the means for the exchange of ideas, cooperation of effort, and rendering of service between the school and community. A research project can be yours for the asking.

George A. Chambers serves as Coordinator of Distributive Education, Washington Community School District, Washington, Iowa.

NUCLEAR ENERGY WILL BE STUDIED AT NEW JERSEY VOCATIONAL SCHOOL

Camden County Vocational and Technical High School, Pennsauken, N. J., has become a pioneer in teaching nuclear energy in secondary schooling with installation of the first nuclear plant in New Jersey. The school is said to be the first to take the plunge to meet today's challenge to prepare young people for entering this field. The plant has been acquired at a cost of $3,000 from funds provided under the National Defense Education Act from the New Jersey State Department of Education.

The plant duplicates what is found in industry, and it is not just training equipment which regular high schools will eventually use, according to Al W. Pitner, industrial chemistry instructor.

Mr. Pitner explains that the plant is in three sections: the storage compartment of two-inch lead bricks in which the radioactive materials are stored; the work phase where samples are prepared; and the scaler, an electronic adding machine to count the impulses. There are two type detectors, the Geiger tube which counts Beta Rays and the Scintillation type to detect Gamma Rays.

The radio-active material includes long-life isotopes and the uncalibrated sources, but which are harmless according to Mr. Pitner. One vial, it was stated, has the same amount or less material than a radium dial of a wrist watch.

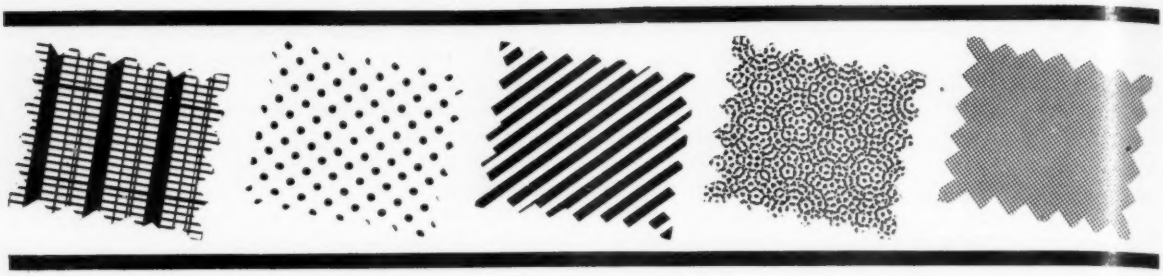
To Mr. Pitner the acquisition of the new facilities marks the culmination of a long dream. "The primary object is to explore and prepare curriculum material which will be suitable for students from the eighth grade up," he said. "Students will be trained to handle materials in a safe manner and learn to actually work in nuclear energy so that when they are ready to enter the industrial world they will be equipped."

The instruction is open to any four-year student within the county free. The text to be used in conjunction with the teaching of nuclear energy is, "The Principles of Radioisotope Methodology" by Dr. Grafton D. Chase, presently of the College of Pharmacy and Science, Philadelphia. Purpose of the teaching will be to cover five main points: nature of radioactivity; detection of radiation; uses of nuclear energy, techniques of handling radio-active materials; safety and disposal.

Grant Provides Opportunities For Graphic Arts Students

Over $25,000 was disbursed during August in scholarship grants to 38 college student recipients of grants from the National Scholarship Trust Fund of the Education Council of the Graphic Arts Industry. They are preparing themselves for careers in the printing and publishing industry. Six colleges are presently represented in this program. The scholarship award winners, some entering college for their first year, others their second, third and fourth years, were selected on the basis of a national competition.

At least 12 new four-year scholarships will be available for the school year 1962-1963 to present high school seniors who plan to enter the printing industry in the fields of management, engineering, science, design and teaching. To compete for these scholarships, students must take the College Board Preliminary Scholastic Aptitude Test on either October 17 or 21, 1961, and file their applications by November 17, 1961, with the National Scholarship Trust Fund of the Educational Council of the Graphic Arts Industry, 1411 K Street, N. W., Washington 5, D. C. Competition rules and applications are available from the Education Council upon request.



Slow Learners At a Two-Week Workshop

Florence M. Reiff

Wilmington, Delaware, Public Schools

MAMIE was 15, sullenly silent and withdrawn. For more than a week she sat, head bowed slightly and eyes downcast. Direct questions were answered in monosyllables, if at all, and in a voice so low that repetition was always a necessity. Mamie held the work of the day so close to her face that one would suspect she needed glasses. Or was she simply shutting out a world of failure as much as she could? Mamie had a first grade reading level.

Annetta, a clothes-conscious teenager of 14, rated the way she looked as one of the most important aspects of life. Tall and willowy, she assumed an attitude of boredom to cover her insecurity. Eager to demonstrate ability, she was always first to volunteer for anything—many times before she really knew the answer. She rarely smiled. The best reader in the group, she had mastered fourth grade materials well.

Lillian had an immature figure for 16, but her social poise and concern for people would shame many an adult. Animated and enthusiastic about everything, Lillian was daunted only by intellectual pursuits. In situations where she had to think and reason, she lost her zest; then her face would grow bleak and her eyes would dull. Lillian could read fourth grade materials haltingly.

Barbara preferred to be called "Zorro." She was a chunky 14-year-old with snapping dark eyes. She did and said things for attention of whatever kind she could summon. She lounged in her chair; "doodled"; refused to cooperate; was always tired; had a constant headache. And she tried her best not to be interested. On the rare occasions when, in spite of herself, we captured her attention, she was a completely different person. Records indicated she had a reading ability equal to the fourth grade, but we never found out. Barbara wouldn't read!

These are not fictitious examples, but represent four real, live girls who came to "school" at Montclair State College in New Jersey this past summer to be a part of a workshop on Home Economics for the Educable. (A more detailed report of the workshop will be made available in the near future through Miss Dorothy Brevoort, New Jersey State Supervisor of Home Economics.)

It is the purpose of this article to point out briefly some ways of working with slow learners and educable children.

First, and probably most important, we must understand *how* these youngsters learn and the *differences* that exist between their techniques and those of normal children. Not only do educables acquire knowledge at a slower rate than average children, but their *peak* of learning reaches a plateau more quickly. Their manner of learning also differs.

Educable children learn *atomistically*, bit by bit, and, for the most part, by rote. Children of higher intelligence learn *integratively*, attaching meaning to each part, thus enabling them to reason.

Educable children are concretistic and have difficulty dealing with the abstract.

Even though learning experience for them must be developmental in nature, it is necessary for them to do the same thing in a number of different ways until they have mastered the knowledge or skill. Everything must be related to everything else; there can be no loose ends.

With an educable child one can never take for granted that he knows something until it has been presented countless times in countless ways, thus enabling him to experience the learning in many different forms.

To illustrate, let me describe a lesson in clothing selection that was presented to the girls in the demonstration class. Colored pictures from fashion magazines were mounted on construction paper. The teacher held up the various pictures, one at a time, and the girls were asked to name the fabric pattern—stripe, plaid, plain, polka dot, and print. As each was mentioned, the word was written on the board. Similarities of the four words beginning with the letter "p" were discussed and the words compared.

Each girl was then given several mounted pictures showing dresses made of the five fabric patterns and asked them to identify them aloud. Pictures were traded and the identification of the word with the picture was done again.

Following this, the pictures were collected and a pile of assorted fabrics placed on the table. Flash cards bearing the five words were held up, one at a time, and the girls were asked to find the appropriate fabric in each instance. (There were several samples of each pattern type, thus allowing for decision as well as preference.)

After several rounds the girls were given an activity period during which they made a notebook page for each of the terms. They wrote the word at the top, found and clipped a magazine picture to illustrate it, and cut a swatch of fabric, both of which they pasted on the page.

The following day the teacher held up a different fabric swatch illustrating each of the five words and the girls wrote the appropriate word as a test. Further review took place when each girl found a combination of stripe, plaid, polka dot, and print with a plain fabric. Discussion of pleasing combinations flowed easily while the girls worked with the swatches. Lillian said: "Plaids and stripes just don't look right together"; Anna countered with: "That's because they're so all-over."—Objective accomplished!

The dearth of suitable materials in home economics for teaching slow learners and educables is a real problem. There are few commercial materials and practically no books that can be used just as they are. We are fortunate, however, to have much material of all kinds that can be adapted. Women's magazines show pictures for all areas of home economics; all scissors, paste, construction paper and a colored flow-through marker, plus a little ingenuity, and effective materials may always be provided. This takes time and creativity on the part of teachers, but as materials are developed, they may be used repeatedly in a variety of ways.

Perhaps most important of all in working with educable children is the attitude of the teacher and, yes, the profession itself. Many home economists, stiffen imperceptibly when the subject of the slow learner is mentioned. We all know the reasons for this and why we try to attract the capable child to our courses, but are the less capable not just as worthy? Should not these children have more careful teaching so that their family life may add security and a feeling of accomplishment? Because, have homes and families they will. Intelligence quotients are not asked for on marriage licenses!

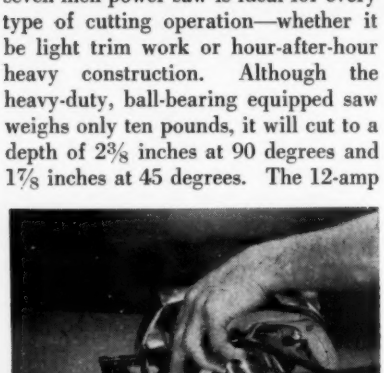
One must *want* to work with these children to be successful with them. Patience, sincere respect, a sense of humor, and an optimistic approach are all necessary qualities. The work is challenging and rewarding.

Two weeks with these children was not long, but it demonstrated that improvement for them was not impossible. A short two weeks was long enough to show that educables are people—and pretty wonderful people, at that.

TRADE TALK

VERSATILE POWER SAW

This new Model 177 Porter-Cable, seven-inch power saw is ideal for every type of cutting operation—whether it be light trim work or hour-after-hour heavy construction. Although the heavy-duty, ball-bearing equipped saw weighs only ten pounds, it will cut to a depth of 2⅜ inches at 90 degrees and 1⅞ inches at 45 degrees. The 12-amp



motor has an idle speed of 4500 rpm. The new saw features a built-in shaft lock which securely locks the shaft for quick and easy blade changes. Conveniently located controls make it easy to raise or lower the saw to the desired cutting depth, or position the unit for bevel cutting.

Rockwell Manufacturing Co., Power Tool Division, 400 N. Lexington Ave., Pittsburgh 8, Pa.

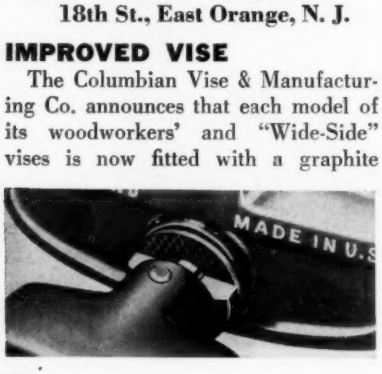
PROJECTION TABLE

The Charles Beseler Co. has develop an exceptionally versatile tilt table designed for use with the Beseler Vu-Graph Overhead Projector Models 7750 and 6600. To attain desired screen image position the user simply loosens the control knob on the side of the table, and using the convenient handle on the front, raises or lowers the Tilt Table and projector. In addition, individual, finger-tip controlled, knurled discs control the raising and lowering of *each* leg of the Tilt Table for simple, accurate leveling.

Charles Beseler Co., 219 S. 18th St., East Orange, N. J.

IMPROVED VISE

The Columbian Vise & Manufacturing Co. announces that each model of its woodworkers' and "Wide-Side" vises is now fitted with a graphite

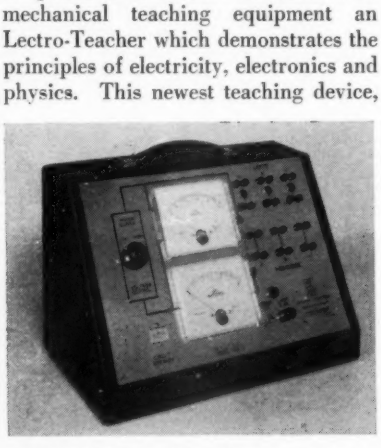


bronze thrust bearing. This is reputed to constantly lubricate the screw head without oil or grease. It also absorbs thrust, assuring easy positive operation while preventing wear and eliminating end play. The manufacturer states, because of this bearing, Columbian Vises can be "pulled up tighter" and held more securely with less pressure. Said to be exclusive with Columbian products, bearings are used on 16 different woodworkers and four "Wide-Side" vises. Bulletin L-4689-A.

The Columbian Vise & Mfg. Co., Cleveland 4, Ohio.

"LECTRO-TEACHER"

Universal Electronics Laboratories Corporation has added to its line of mechanical teaching equipment an Lectro-Teacher which demonstrates the principles of electricity, electronics and physics. This newest teaching device,

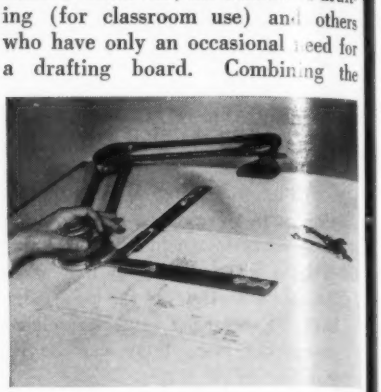


designed for use in elementary, high schools and colleges, is built in the form of a portable laboratory to demonstrate simply and effectively basic electrical calculations using Ohm's Law. Understanding difficult circuitry and electrical problems is reduced to a common denominator that every student can learn simply and at a much faster pace. Classes of up to 50 students may follow changes in readings and easy to view lights on the machine.

Universal Electronics Laboratories Corporation, Hackensack, N. J.

FAST DRAFTING MACHINE

This new compact, desk and table-top drafting machine provides fast and accurate finished drawings of complex diagrams. Called the Paragon Jr, the new unit is for use by the design engineer, architect or draftsman who requires a board for part-time office or home use; the student of drafting (for classroom use) and others who have only an occasional need for a drafting board. Combining the



drawing capabilities of a T-square, straightedge, triangle, scale and protractor, it features controls that permit one-hand operation. It operates efficiently on any drawing board inclined at any angle up to 20 degrees and will accept any scales with standard chuck plates.

Keuffel & Esser Co., Third and Adams Streets, Hoboken, N. J.

NEW SLIDING WALL

A new sliding wall developed by the E. F. Hauserman Co. permits classroom space to be instantly adapted to the needs of any hours of the day and it delivers the same sound privacy as most fixed walls commonly used in schools. The Operable Wall is made up of individually hung panels which slide in or out of place on a patented hanger assembly. As a room divider, it delivers a full 39 decibel sound reduction which, according to the manufacturer, is the same sound privacy provided by most fixed walls used in schools. In place, dividing two areas, Operable Wall has a flush, permanent appearance. It can be manually operated by one person.

E. F. Hauserman Co., Dept. 11M-2, 5711 Grant Ave., Cleveland 5, Ohio.

CIRCULAR SLIDE RULE

General Industrial Co. announces a new handy Circular Slide Rule for en-

gineers and for other plant and office executives. Operation of the pocket-size rule is simple and the results are accurate. To multiply, divide and find proportions is easy and fast. The company offers a free rule to engineers and other business executives making the request upon their business letterhead.

General Industrial Co., 1788J Montrose Ave., Chicago 13, Ill.

INSTRUCTION MANUAL

Metalworking instructors are offered a free copy of the Arcair Process Instruction Manual. The 32-page manual contains complete information on advantages of the Arcair process, how it is used, as well as operating instructions for Arcair torches. Contents of the manual include chapters on operating principles, power sources, electrodes, using the Arcair torch for gouging, cutting, flushing, beveling, and cutting or gouging special materials such as stainless steel, cast iron, high nickel alloys, copper base alloys, magnesium and aluminum. The manual is profusely illustrated and contains many drawings and procedures.

Arcair Co., P. O. Box 406, Lancaster, Ohio.

PORTABLE SANDER

An addition to Skil's industrial line is this all ballbearing orbital sander, Model 992, designed for those who do continual production sanding. Weighing only 5½ lbs., it is easy to use for overhead and vertical work such as sanding drywall joints, and is useful for custom and production sanding of new stock as well as other jobs such as removing old paint and varnish.

Skil Corporation, 5033 Elston Ave., Chicago 30, Ill.

FARM SPACE HEATER

Thor Power Tool Co. claims exclusive features for its new space heater that make it "the most economical on the market." The new Thor Speed-Heater is a portable oil-fired unit for temporary heating and drying in frigid areas on farms. Low pressure firing provides an amazing .90 gallon fuel consumption per hour, permitting the heater to operate 13 continuous hours at low fire. The burner atomizes fuel centrifugally so there is no odor, no smoke, no build-up of fumes. It weighs 42 pounds less fuel, has compact dimensions of 30¾" length, 13" width and 26½" height, and can be operated anywhere standard electric voltage exists.

Thor Power Tool Co., Aurora, Ill.

Industrial Education Image

(From Page 12)

concern about ethics—ethics as a basis of economic soundness and ethics as reflected in personal integrity! The industrial processes of a people may be extremely advanced in a scientific or technological way, but if that society lacks the strength of character and the basic regard for truth and for the rights of the other fellow, then the future of freedom is far from bright and the human race may yet be lost. Let there be no conflict between science and the humanities but rather a coalescence of man's interests and motives and his skills and knowledge to the end that liberal education will be motivated by the reality of life's occupations and vocational education will become more "liberal" by offering truly liberal experiences in a setting of human dignity.

No greater tribute can be paid to the man whose name this lecture series will bear than the building of a strong and dynamic program on the foundation of the principles for which he stands. He has devoted his energies, his great ability and his strong personal leadership to the development of a better understanding of the contribution industry makes to the welfare of this commonwealth and has shown the great dependence such industry has on a well trained citizenry. Let us demonstrate to Samuel Leonard Fick that industrial education is a part of the great field of public education—not a thing apart; that we can and will work with the other disciplines to the end that our students will become not only good industrial producers but that they will bring character and understanding to their responsibilities as members of the family, the community, and the nation.

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GENERAL METAL: Principles, Procedures, Projects, 2nd. Ed.
by Roland R. Fraser and Earl L. Bedell

This outstanding new edition stimuates students through shop work in metal construction with common tools and simple machines. A broad introduction to the possibilities in metal working.

INDUSTRIAL ARTS FOR THE GENERAL SHOP, 2nd Ed.
by Delmar W. Olson

Here is a new edition with a brand new approach to the industrial arts—the approach is from technology through a study of several basic manufacturing industries.

For further information write to:
PRENTICE-HALL, INC.
Educational Book Division, Englewood Cliffs, N. J.

Despite geographical differences, Mary Owers Fleming (California) and Marion C. Benson (North Dakota) have come up with a unique, student-centered book on home nursing. In fact it's called *Home Nursing Handbook.* (D. C. Heath, 1961, 264 pp., $3.96 list). Home and family values are stressed, as is medical authentication. Charts, diagrams, how-to-do-it drawings and photos are scattered profusely throughout. This was designed for beginners—and for classrooms.

Slide Rule Simplified by Charles O. Harris, American Technical Society, 277 pages. This guide is now in its eighteenth printing. It's basic—designed so that "anyone who will study and practice can learn to use the slide rule with ease and confidence."

Also from American Technical Society comes *Understanding and Servicing Fractional Horsepower Motors.* It's over 250 pages long and sells for $4.95 retail. It was written for the serviceman who is more concerned with application than with design. Electrical engineer, consultant, and teacher Kennard C. Graham of California explains one big reason why the book was written: "Few homes today have less than three fractional horsepower motors . . . Consequently the opportunities for qualified motor servicemen are virtually unlimited." Both AC and DC motors are completely covered beginning with motor theory and concluding with trouble-shooting procedures.

Recognizing the profound effect that research has on developing and maintaining sound programs of industrial education, the National Association of Industrial Teacher Educators has cooperated with the Trade and Industrial Education Branch in publishing *Research in Industrial Education — Summaries of Studies, 1956-1959.* This three-part bulletin not only brings up to date the publication of summaries of studies in industrial education, but furnishes a much more adequate index for studies summarized and published since 1930. Part I includes summaries of 116 doctorates, 312 masters, and 6 staff studies in industrial education. Part II includes a list by author of the doctoral studies summarized in Vocational Bulletin 264, *Research in Industrial Education — Summaries of Studies, 1930-1955.* Part III is comprised of a subject index of the summaries of all studies included in the new as well as the former publication.

Books

Interior Electric Wiring, Part I — Residential, by Kennard C. Graham, American Technical Society, 1961, 311 pages, $4.75. This is not just a "how to" book. The author not only explains practical wiring procedures, but stresses such other essential factors as wiring safety, alternative wiring methods, or forms in their relative merits, designs and estimating.

Considerations are given to such modern conveniences as refrigerators, washing machines, furnaces, and the problems arising therefrom. The book also discusses the important subject of estimating in detail.

Selecting and Storing Tractor Fuels and Lubricants, published by the Southern Association of Agriculture Engineering and Vocational Agriculture, Athens, Ga., 1961, 48 pages, $1.00. Many claims have been made regarding developments and improvements in present-day fuels and lubricants, leaving the reader confused. Do you actually get more power, less wear and more service before an overhaul?

Providing the answers to these questions is the purpose of this publication. To help you better understand "Why," the matter of "How" is also discussed, such as: How different parts of a tractor work—their basic operating principles—and how different chemicals work in oils and fuels. The publication should prove of considerable value to vocational agricultural teachers and as an instructional aid.

Directory of Vocational Counseling Services, 1961-1962 provides an invaluable tool concerning qualified vocational counseling services. Published by the American Board on Professional Standards in Vocational Counseling, Inc., it contains essential information on 165 approved services. The *Directory* may be obtained from the American Personnel and Guidance Association, 1605 New Hampshire Ave. N.W., Washington 9, D.C., for $1.50.

Woodworking for Everybody by John G. Shea, D. Van Nostrand Company, 1961, 219 pages. This Third Edition of a best-selling book which has been completely revised, was reviewed in the May, 1961, issue. The price of the text edition to teachers for classroom use is $4.96. The price of $6.25, as listed in the review, is for the trade edition.

The Instructor and His Job by Homer C. Rose, American Technical Society, 1961, 280 pages, $5.50. This is a clearly written book containing the most practical and productive use of the training techniques employed in modern schools, industry, government and the military services. The text first examines the personal attributes of the good instructor and makes clear some important facts about the learning process. It presents a format for determining what to teach and how to prepare oneself for lecturing and conducting discussions. It discusses in detail the demonstration. Thorough coverage is given to training aids, lesson planning, testing and other important areas of instruction. The author is Chief, Management Training and Training Development Branch, Federal Aviation Agency.

Optimum Design of Mechanical Elements by Ray C. Johnson, John Wiley & Sons, 1961, 535 pages, $11.50. The primary objective of this book is to present an explicit *method* of design, which has evolved from the author's industrial and academic experience in the design field during the past decade. It presents a method of mechanical design which can be applied to innumerable original design problems, and which minimizes the "cut-and-tried" practice so characteristic of the present design literature.

The book considers chiefly that type of design problem whose solution depends on the employment of some theory. However, it does not preclude such problems for which a satisfactory if not an optimal, design solution can be obtained without a consideration of theory.

Cowboy Arithmetic by Harold L. Oppenheimer, Interstate Printers and Publishers, 1961, 165 pages, $4.95. A practical, down-to-brass-tacks book, this publication covers thoroughly the field of cattle as an investment. It is a guide for the cattle investor, the commercial beef breeder, and for students who plan to enter this field. Despite its high level of authoritative technical information, the book is written in an easy-to-read, pleasant style. The serious side of the book is lightened by accounts of the origins of some of the great cattle empires and pioneer cowboys, including pictures of men and scenes which would be difficult to find elsewhere.

from the Public Information Committee

The Public Information Committee is conducting a survey of all State Associations to determine the nature and extent of State activities in public information. The survey is being directed by Jarrot Lindsey Jr., Atlanta, Georgia. It is essential that AVA have a clear-cut view of the status of public information activities in order to prepare functional programs for the future. It is expected that a complete report of the survey will be made at the convention in Kansas City in December.

Ventures in public information, independent of state association activities, are known to exist in many local communities. The PIC would appreciate knowing of these activities and in receiving copies of materials which have been developed and distributed locally for public information purposes

In October the National Society for the Study of Education will consider a request from AVA's Public Information Committee that the NSSE devote one of its yearbooks to the topic of vocational education. On five previous occasions—1905, 1906, 1912, 1924, and 1943—NSSE yearbooks have dealt with the subject of vocational education. If the proposal is accepted by the NSSE Board of Directors, we may look forward to a yearbook in 1965 or 1966.

Ontario Plans Large Training Expansion

A new program to expand vocational training opportunities for Canadian youths has been launched in the province of Ontario. The plans, announced recently by Premier Leslie Frost, will revamp the Ontario secondary school system at a cost of up to $100 million over the next 18 months as part of a bold new approach to Canada's present-day manpower problems.

The plan takes away the traditional emphasis from the academic high school and upgrades technical and commercial schools. A top priority program to rewrite technical and commercial courses of study for use in September, 1962, was scheduled to begin this Fall. Such courses would lead to university study in commerce, business administration and engineering.

A more immediate result is expected to be a province-wide construction program costing at least $80 million for new trade and technical training facilities. Seventy-five per cent of the cost will be paid by the Federal Government and the remainder by the province. Entirely new trade, technical and commercial courses will also be made available.

The plan, expected to provide an extra 50,000 pupil spaces, many in rural areas where technical education has never before been available, contains extensive provisions for the training of new technical and vocational school teachers. They will be recruited from industry and their tuition will be paid at the Ontario College of Education.

According to a brochure issued by the Canadian Department of Labor, unskilled and semi-skilled jobs now represent only 30 per cent of all employment in Canada. These latest statistics spotlight the revolution in employment in Canada resulting from the introduction of more and better machines and improved methods and which have been gradually wiping out thousands of jobs that require little education or training.

A.W. Johnson Honored For 35 Years Service

Arthur W. Johnson, former supervisor of vocational agricultural education in Montana, was honored at a special program held during the recent Vocational Education Association conference in Helena, Mont. Teachers attending the convention and close friends paid tribute to Mr. Johnson in recognition of his 35 years of service dedicated to agricultural education in Montana.

Mr. Johnson's teaching career dates from 1926, when he accepted a position at Choteau following graduation from Montana State College. Two years later he moved to Deer Lodge and in 1929 he founded one of the first Montana chapters of Future Farmers of America.

Industrial Arts

(from page 21)

lated special interest topics.

In relation to mathematics, industrial arts should:

1. Provide an opportunity to solve genuine mathematical problems found in the laboratory situation.
2. Provide visual examples of mathematical principles.
3. Develop an awareness of the value of mathematics to industrial skills.

In relation to science, industrial arts should:

1. Provide the opportunity to observe the application of physics principles in the solution of meaningful problems.
2. Provide the opportunity to observe the application of chemistry in materials and processes.
3. Provide an opportunity to become acquainted with the role, and life of plant and animal life as applied to industrial materials.

In relation to social science, industrial arts should:

1. Provide an opportunity to observe and take part in the democratic process through class organization.
2. Provide a familiarity with geographic sources of various industrial materials.
3. Provide a familiarity with the history and development of industrial tools, machines, materials, and processes.
4. Provide a familiarity with the conservation and importance of natural resources to the industrial economy.
5. Provide knowledge to help foresee future industrial needs.

One can readily see that the future of industrial arts is in the hands of the industrial arts teacher. Completely dependent upon how well industrial arts is integrated and correlated into the whole of the general educational pattern. This can best be done, by creating problem solving situations that not only imply, but actually demonstrate the relationship that exists between industrial arts and the other subjects in the curriculum.

VOCATIONAL AGRICULTURE—PAST AND FUTURE

M. D. Mobley, Executive Secretary
American Vocational Association

This is a speech made by Dr. Mobley to several Vo-Ag groups. It is being published in the JOURNAL by special request

First, let's take a look at the past—the part vocational education in agriculture has played in our nation's economy. Vo-ag teachers and officials have rendered a service to this nation beyond description and impossible to evaluate.

It is you and your counterparts—present and past—throughout the nation, we must thank for nutrition at its best; for production and progress in farming unmatched in the annals of time; for products and by-products that have improved every aspect of daily living; for the precious comfort of knowing that because of you and your know-how and your ability to teach others, our children and our children's children will never suffer the tragedies of famine, nor lack for an adequate diet. The United States is one of the few countries in the world today to which these statements could apply.

Your efforts have contributed greatly to the agricultural revolution that has taken place in this country in recent years. You and your counterparts have played a major role in its success. Never in the history of mankind has there been such a phenomenal increase in agricultural production per man in so short a time as has occurred in the United States. Vo-ag teachers and officials have contributed greatly to this increased production per man.

America's great agricultural developments—the tremendous increase in production per man—have come about as a result of research and education. Teachers of vocational agriculture have played a major role in the education phases of the program.

Farmers Benefit

Agricultural research is of no value—makes no contribution to farm progress—until it is put to use on farms. Through your teachings and efforts, research findings have been made known to American farmers and to future farmers and thus put to use on our nation's farms. There is no way to evaluate the increase in dollar income and the increase in better living standards on farms that have resulted.

No one should ever forget the part vocational agriculture has played in the great agricultural revolution we have seen in this country in the last twenty years. The great progress in agricultural production and living standards will ever stand as a shining monument to you, your efforts and your devoted service.

I never think of the great productive capacity of our American farmer but that I am reminded of what I learned while in Pakistan several years ago. I was there to help the government of that new country in an old land to plan a total program of vocational education. While there, I learned that 80 percent of the workers in Pakistan are farmers, a large percent of whom are engaged in producing food. Yet they are unable to produce enough to feed themselves. I could not help but think of the fact that here in the United States, where only about 10 percent of our workers are engaged in farming, we are producing more farm products than we can consume domestically or sell profitably in the markets of the world. America's industrial might is due in part to the work of Vo-ag teachers. Increased farm production has resulted in releasing many from farms to engage in industrial pursuits. About 47 percent of Russian workers are engaged in farming. This has seriously handicapped the Soviets in developing industrial production. Russia has never had a Vo-ag Program such as ours.

In fact, vocational educators in agriculture have done such an outstanding job, that there are a few people, some who are considered intelligent, who want to see the program in which you are engaged reduced or scuttled. Their proposals are based on the theory that there is no longer need for the teaching of agriculture. They argue that the farm population has decreased and that in the future we do not need so many farmers and hence the teaching of vocational agriculture should be eliminated or greatly reduced. When I hear or read such statements, by supposedly intelligent people, I sometimes remark: "How silly can people be?"

It is true that we do not need proportionately as many farmers today as we did twenty or thirty years ago or even ten years ago; and we may not need as many farmers in the immediate future. Through your efforts, farmers have become so efficient that one farmer today can produce several times as much as one farmer could produce a few years ago.

As already stated, this has come about as a result of research and educa-

tion—especially vocational education in agriculture. There are some who argue that increased agricultural production is due largely to the mechanization of farms. But anyone who gives this matter careful thought must surely reach the conclusion that only intelligent, educated people can use labor-saving machinery efficiently and successfully. It is also true that only intelligent, educated people can understand the results of research and put it to use on their farms.

Yes, we will have to admit that we need a smaller per cent of our people in farming but in the near future not necessarily fewer people engaged in farming.

Then we must never forget the fact that those who expect to be successful farmers must be better educated—vocationally competent, if you please—than their predecessors.

It should also be remembered that there has never been a time in the history of the program in the United States when more youths were enrolled in vocational agriculture than were needed to replace the farmers who through death or retirement were dropping out of the occupation of farming. The same is true today.

Some are predicted that by 1980 we will have a population of 250 million people and that only five per cent of this number will be engaged in farming. If this is true, it would mean a total farm population of 12,500,000 persons. Assuming one-fifth of these 12,500,000 is a farm operator as is true today, we would have 2,500,000 farmers. Using 35 years as a service span for a farmer and allowing for continued consolidation of farmers, then ordinary demands would call for about 40,000 beginning farmers each year.

More Students Needed

So far, no one has been able to work out a system of identifying those who will take up an occupation ten years hence. But let us assume that we will need two graduating seniors for each opening on the farm. This calls for 80,000 seniors. If one-sixth of the enrollment were seniors, the approximate proportion today, we would require a total enrollment of 480,000 high school boys. Currently, we have enrolled only about 400,000 high school boys. These calculations indicate that at this time we have less than the number needed enrolled in vocational agriculture for the present and for the future. And this does not take into account the great need for expanding young and adult farmer training programs.

Next, let us look at the future for vocational education in agriculture. I believe the future is bright.

Not long ago, I received a letter from Vo-ag teacher in which he stated:

"From various reports, I am hearing that the future for agricultural education appears to be rather discouraging."

Then he asked this question:

"Would you please advise me on the outlook for the field, as I feel it wise to check before making any change to something else?"

In my reply to him I stated:

"If you like your work as a teacher of vocational agriculture, I would strongly advise you to stick with it. The outlook in that field is very bright. I know of a few people, lacking knowledge of the need for a total program of education, who are advocating that science, mathematics and languages be substituted for some phases of vocational education. This fad will, in time, run its course. The need for vocational education in agriculture will continue."

It is my sincere belief that I gave this teacher good advice.

Teachers Face Challenge

Changes in the teaching content must occur. The instruction in the future, as in the past, must keep pace with changes in agriculture.

In some rural communities—due to business and industrial developments—the need for vocational agriculture will cease to exist. But the need in the nation as a whole—with some shifts in emphasis—will remain important in the years ahead.

If our nation's population continues to expand at the present rate and young men fail to enter the occupation of farming in sufficient numbers, there could come a time, in the not too distant future, when we will have a shortage of farm produced food and fiber rather than a surplus.

We must remember, too, that if our current birthrate does not subside—and there is no indication that it will—and if the average span of life does not decrease, we will have in the world by the year 2000 a total of almost 6 billion people. Today, we have half that number.

Barring the devastation of a nuclear war, this means that the great problem of the future may well lie in the production of sufficient food to feed the teeming millions around the globe. America's technical and agricultural production know-how will and must play a vital part in the struggle to produce enough to give all of the people of all nations even a sustaining diet. It will be a long, long time before it will be entirely adequate.

In the days and years ahead, we will see more and more attention given to the selection of students for enrollment in vocational agriculture classes. This is a must if the program is to function effectively.

Farmers Need Help

In addition, more attention than ever before will be given to out-of-school young farmers who are already engaged in farming and who are struggling to pay for land, stock their farms and secure adequate and proper equipment. They are already faced with serious problems and in many, many communities are seeking advice and help. Expansion of Vo-ag programs to serve these young men is essential, if we are to do an effective job of vocational education in agriculture. Other agencies will do this job if it is not done by Vo-ag teachers—who can do it best and at the least cost.

Farming is more complicated than ever before in the history of mankind. There is more knowledge about agriculture than ever before. We have improved varieties of plants. Animals and poultry have been bred to produce more efficiently on a given amount of feed. We also have more plant and animal diseases and insects—but our methods of control are more efficient. A farmer to be successful must know about these and other things. He must be better educated and possess more knowledge and skills than his predecessor.

What I am trying to say is that the teaching of vocational agriculture is more important today than ever before. We may be dealing with better varities of plants, improved breeds of animals, new insects and diseases and their control, but we are dealing with the same kind of people. And people must be educated and vocationally trained in order to be successful in our ever increasing competitive society. The Vo-ag teacher's job is indeed an important one—and will continue to be. There will always be a need for vocational education in agriculture

Indiana Conference Stimulates Leadership

Indiana vocational educators came together recently for a State Leadership Conference based on a pattern established by the Trade and Industrial Education Branch of the U.S. Office of Education. At these meetings educators chosen for their leadership potential take an active part in a series of experiences designed to prepare them for eventual roles as supervisors or administrators.

A similar conference was held last year for Indiana trade and industrial educators. The 32 "graduates" of the "Class of 1960" carried their enthusiasm and newly-developed leadership abilities back to their local programs and things began to happen. Educators in homemaking, agriculture, and distribution expressed a good deal of interest in the Conference. The resulting chain reaction prompted the Indiana State Director of Vocational Education to call an early meeting of his Conference Planning Committee. The advisability of expanding the base of the Conference to include those persons representing the other vocational areas was suggested. It was agreed that a well-planned conference could result in understandings that would be most valuable in furthering vocational education as a total program in the state and the project was initiated.

Several resource persons and consultants assisted with the Conference. Representing the U.S. Office of Education were James H. Pearson, Assistant Commissioner for Vocational Education, and Harold J. Rosengren of the Trade and Industrial Education Branch. Mr. Pearson urged the continued development of the area vocational school concept. He indicated that every person, youth or adult, with a need in some phase of vocational education should be given the opportunity to have that need fulfilled.

Mr. Rosengren stated that each conferee should consider himself as an educator, as a vocational educator, and as a specialist in a particular area. He further highlighted the urgency of establishing functioning advisory committees, and the impact of automation on our society.

Progress is impossible without change; and those who cannot change their minds cannot change anything.

—*George Bernard Shaw*

Data Processing Studied

Electronic Computers Offer Unlimited Vocational Opportunities

It is estimated that 75,000 electronic computers are in use in American industry today and the manufacturers of data-processing equipment are confident that the surface has barely been scratched in the application of electronic computers. Further evidence of the recent development of this industry can be found in the fact that of the 44 comprehensive books on data processing *the oldest one was published in 1954.*

One prominent industrialist has stated that the development of the electronic computer will prove more momentous than the invention of the airplane or the atomic bomb. Data processing is not just one more industry, but a giant step forward in man's utilization of science and knowledge as a means of progress. Many new jobs will be involved. These must be analyzed to determine the bases for new courses and curriculums. There is great need for further study through conferences to explore the needs for organizing new programs to meet the challenge in this rapidly expanding field.

A timely and effective conference designed to study aspects of Data Processing as related to training programs under Title VIII of the National Defense Education Act of 1958 was sponsored by the International Business Machines Corporation and the Area Vocational Education Branch. Forty-four vocational educators from 20 States and the District of Columbia were in attendance at the conference held in Poughkeepsie, New York, on July 10, 11, and 12.

Walter M. Arnold, Director, Area Vocational Education Branch, gave a progress report on technician training programs and spoke briefly on the Business Data Processing curriculum now being developed by the Area Vocational Education Branch. Several educators spoke on their experiences with data processing training programs.

Peter P. McGraw, Specialist in Data Processing System, U.S. Office of Education, spoke on the use of data processing systems in colleges and universities and indicated that training will be needed for personnel for an estimated 5,000 new installations in the colleges within the next five years. Howard A. Matthews, Specialist, Educational Records and Reports, U.S. Office of Education, in reporting on Title X, National Defense Education Act, noted that 41 States and 400 local school systems are now using data processing equipment and more installations are in the planning stage.

The conference demonstrated that there is a big training job ahead in the data processing industry and to the vocational educator it is evident that there is a training job to be done in this rapidly expanding field of electronic data processing. But what are the job functions and what type of training and how much training is needed? Answers to these and other questions are being sought by educators engaged in planning training programs in this brand new field.

IBM

ROADS TO ACTION

The National Committee for Children and Youth, an outgrowth of the 1960 White House Conference, invited a representative of the AVA to participate in a three-day working and action conference on "Unemployed, Out of School Youth in Urban Areas." This meeting was held at the Statler Hotel, Washington, D. C., May 24-26, 1961. Approximately 500 persons attended from 37 states.

Dr. James B. Conant was the Conference Chairman and keynote speaker. Dr. Conant said, "Not only is [unemployment of youth] a great waste of manpower . . . it is an explosive situation."

A Conference Report, *Social Dynamite*, is being prepared and it is hoped will be available in late September or early October. Following are excerpts from the "Preliminary Summary of the Recommendations coming from the Thirteen Workgroups":

ROADS TO ACTION

I. Strengthening the Schools
for greater responsibility with children and youth in areas where school drop-out and unemployment are large. These include:

a. A revision and strengthening of the curriculum by broadening and making it more flexible. Recommendations were to: Reorient, more functionally for pupils: College for college bound; technical for some; vocational for skilled crafts, including commercial; and new occupational curriculum for those whose aptitudes suit them for unskilled work.
Vocational program of job up-grading.
More face to face classroom contact between students and employed craftsmen, and planned visits to places of work and better orientation in the culture of the city.
Emphasize constructive attitude toward work.
Train youth for family life in junior and senior high schools.

b. Teacher training, both pre-employment and in-service. "Too many teachers look down their middle-class noses at the lower-class child."

c. Extension and enlargement of counselling and guidance services. "Counsellors specifically trained for this and abreast of job opportunities and resources . . . and using advisory committees of local leaders of industry and business."
Pinpointing the responsibility of schools for continual vocational and educational counselling for all who leave school up to 21.

d. Early identification of potential drop-outs with:
Special vocational or occupational training.
Special skills by teachers with special training for school drop-outs.

e. Work experience:
Expand part-time, cooperative industrial programs with new funds to support the present Federal and State Vocational Education and Training laws.
More trade classes and part-time employment during the 11th and 12th grades.
Broaden entrance requirements for Distributive Education and other similar work programs and provide more funds.
Expand and create vocational and continuation schools, with advisory craft committees.

f. Special vocational training for re-entrance into school.

g. Develop parent education.

h. Programs to deal with special needs of girls.

i. Federal, State and local school boards should profunds and leadership to enable every elementary and secondary school to meet these standards.

II. Employment Services
for these youth need extension.

III. Coordinate the Schools and the Employment Services.

IV. More Job Opportunities for Beginners Are Needed.

V. Action by Labor and Management in the Private Sector of the Economy.

VI. Action Toward Improving Youth's Self-Image.

VII. Reducing Job Discrimination.

VIII. Government Aid, Programs and Leadership.

IX. Cooperation and Organization for the Community Responsibility.

X. The Need to Turn the Spotlight on the Problem, to Inform, Interpret, Awaken Awareness, Generate Concern and Energize Action.

XI. With Need to Interpret Is Linked Need for Facts.
A local, regional and national inventory.
Continuing research to evaluate all programs.
Continuous, carefully documented, statistical evidence and research:
of number and percentage of school drop-outs.
analysis of school leavers and unemployed.
number and type of under achievers in school follow-up studies.

XII. Many Ideas about Follow-up of this Conference.
Attention by State Committees on Children and Youth.
Regional Conferences.
Follow-up local conferences.

Florida Meeting Stresses Leadership

"Every trade and industrial educator should realize the great potential of supervisory training and work towards expanding programs to their fullest in the years ahead." Earl M. Bowler, Assistant Director, Trade and Industrial Education Branch, speaking at a recent state-wide conference in Tallahassee, Florida, underscored the growing importance of training in forestalling a potential shortage of supervisory personnel.

Enrollments in courses in techniques of supervision offered by trade and industrial education divisions of state departments of education have reflected the interest and support of industries by increasing by 90% since 1955. Mr. Bowler cautioned, however, that the rate of growth has been steadily decreasing for the past three years. This and the fact that the number of 35-44 year olds, a prime source of new supervisors, will decrease by 200,000 by 1970 point out the necessity for further expansion of this vital training program. Other factors that make added growth important include:

The aggressive nature of the recruitment of institutions and groups conducting programs and the effect upon trade and industrial education enrollments.

The nature of liaison between the State Supervisor and persons at the local level responsible for programs in this field.

The conference is one of the few of its kind held in the United States in recent years and was attended by approximately 40 persons from all parts of Florida.

Meeting in Washington on Sept. 19 was the Commission on Vocational Opportunity for Rural Youth established by the National Farmers Union. Members of the Commission are as follows: Dr. Howard Dawson, Executive Secretary, Department of Rural Education, NEA; Dr. M. D. Mobley, Executive Secretary, American Vocational Association; Clay L. Cochran, Legislative Consultant, Industrial Union Department, AFL-CIO; Miss Elizabeth Herring, Executive Secretary, National Council on Agricultural Life and Labor; Professor Lee R. Martin, Department of Agriculture, Economics and Rural Sociology, University of Arkansas; President Ben Radcliffe, South Dakota Farmers Union, Mrs. Lorna Miller, Director of Education, Wisconsin Farmers Union and Myron Just, Student and North Dakota farmer. Shown at the head of the table are Dr. John M. Eklund, Director of Education, National Farmers Union and Secretary of the Commission and Mr. James G. Patton, President of the National Farmers Union and Chairman of the Commission.

Star Farmer Selection A Major Undertaking

Thirteen prominent Americans met July 31 in Washington, D. C., to review applications and select a member of the Future Farmers of America to receive the coveted "Star Farmer of America" award for 1961. Included in the group were three well-known farm writers, one U.S. Senator, and nine officers of major corporations.

Each State Association of the FFA is permitted to recommend one candidate for the award. Most of the applicants are 20 to 21 years old, have been out of school three years, and are engaged in full-time farming.

The judges studied applications which included records of the young farmers' achievements since the time they entered vocational agriculture in high school. Important factors weighed included progress toward establishment in farming; their records of leadership in the FFA and the community; cooperation in group activities; financial statement listing assets, liabilities, and net worth, and the degree to which the candidates actually have control of and responsibility for the operation of their farming programs.

Some idea of the judges' problem may be gained from the fact that the top four applicants they reviewed varied from $9,000 to nearly $170,000 in net worth. One featured wheat in his farming program, another beef cattle, the third, dairy, and the other had a diversified farm operation.

Mrs. Theresa Bachmann, Boise, Idaho, is the recipient of the first AVA award given in Idaho for outstanding service in the field of practical nurse education. Mrs. Bachmann was presented the award at the 14th annual banquet of the Licensed Practical Nurses of Idaho, Inc. Shown presenting the award is S. R. Glenn, Chairman of AVA's Policy and Planning Committee. Mrs. Bachmann has been active in promoting practical nursing and practical nurse education since 1947. She was one of the eight original incorporators of the National Federation of Licensed Practical Nurses and was instrumental in securing federal assistance for practical nurse education throughout the U. S.